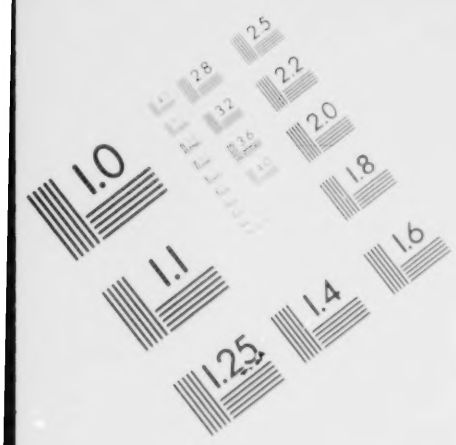

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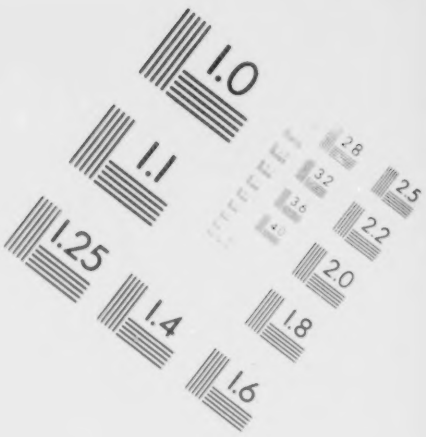

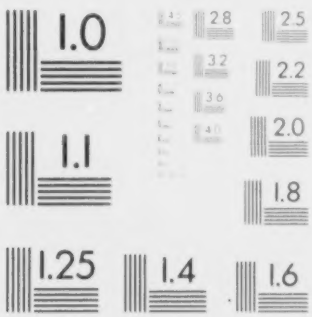

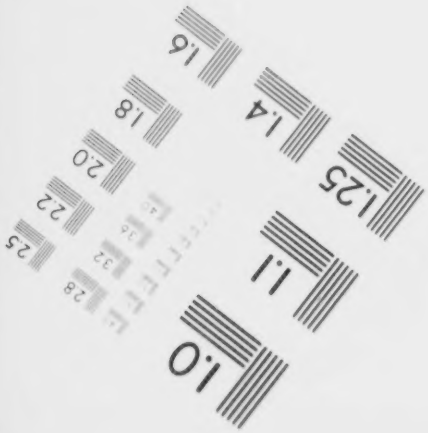

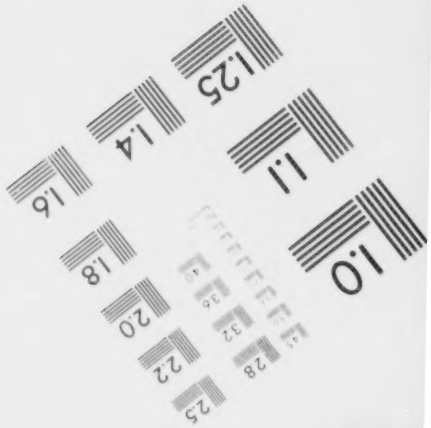

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SOUTH CAROLINA SCHOOL FOOD SERVICE PROGRAMS: A STUDY TO DETERMINE FISCAL EFFICIENCY

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Abstract

South Carolina School Food Service Programs: A Study to Determine Fiscal Efficiency reports an exhaustive study to determine those qualities and characteristics that are usually associated with efficient and effectively operated school food service programs. Data for the study were extracted from district audit reports filed with the South Carolina State Department of Education for all school districts in South Carolina; from the South Carolina Department of Education Office of School Food Services, Lunch and Breakfast Average Daily Participation Reports for 1996-97 and 1997-98; and from South Carolina Education Profiles, 1997 and 1998.

The study found a strong positive relationship between the percentage of students qualifying for free/reduced lunch, breakfast program participation, and capital outlay expenditures. Revenue generated through special sales was found to significantly improve the fiscal efficiency of food service programs, particularly if canteen sales were included in food service revenues. Also, the percentage of revenue devoted to salaries was a significant predictor of fiscal efficiency for self-managed programs but not for food service management company operated programs where management fees are not considered salary. Of particular interest in the study were recommendations included for staffing school cafeterias based on meals per labor hour.

As a result of the study, it was determined that self-operated programs were likely to have better student participation, have greater retained earnings, and spend more money for capital outlay than food service management operated programs. The study also found that district managed programs were more likely to pay greater salaries to food service workers and use more labor hours to produce the student meals served.

CHAPTER I

THE NATURE OF THE INVESTIGATION

Introduction

Unlike other programs in South Carolina public schools that are operated and financed as a part of each district's general operation, the food service program is operated as a "stand alone business." The funds are accounted for as an enterprise fund and are expected to finance the food service operation without assistance from the district's general fund. A district may be compensated for the cost of equipment and building space utilization through indirect cost transfers from the food service fund to the district's general fund at the end of each fiscal year of operation.

Statement of the Problem

School districts should expect food service programs to produce sufficient income to pay indirect costs. Consequently, administrators need to assess the current status of their food service programs to determine those factors related to making the changes necessary to provide for full payment of indirect costs. If a present operation is already relatively efficient, this finding needs to be

affirmed. Some research suggests that when self-operated programs are not as efficient as they should be, food service management companies can help districts improve their operations. However, contracting to a private company the management of a historically self-operated food service program is a significant decision that must not be made without substantial data to support the change. At present insufficient data are available to compare district managed programs and programs managed by food service management companies. Additional study needs to be completed to determine which programs achieve a greater level of financial efficiency.

A food service program must operate with a high degree of efficiency if it is to pay indirect costs. The effort to achieve efficiency of the food service operation must be accomplished without sacrificing the quality or nutritional value of the meals served to students. In addition, the program must continue to be responsive to the educational objectives of the district, must accommodate the meal expectations of the community, and must operate within the framework of the academic schedules at each school.

If efficiency is to be judged by the bottom line comparison of revenues received to expenditures expended, then this judgement must be made in comparison to what other food service operations are achieving when all factors are taken into consideration. In the absence of such comparison, there is no benchmark from which to judge. Thus, this study must examine completely each

food service program in South Carolina and make careful comparisons in order to evaluate the relative efficiency of each operation.

In view of the above discussion, the purpose of the present study is to examine the efficiency of each food service program in South Carolina as compared to other food service programs in South Carolina, including both self-operated programs and programs managed by food service management companies. The study was designed to provide at least a partial answer to the following question: What characteristics are associated with and/or significantly impact the fiscal efficiency of public school food service programs in South Carolina?

To answer this question the following hypotheses will be tested:

Hypothesis No. 1.

The percentage of students approved for free or reduced lunch will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 2.

The percentage of total student sales that are special sales will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 3.

The percentage of lunch daily participation will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 4.

The percentage of breakfast daily participation will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 5.

The average size of schools within a school district will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 6.

The percentage of total revenues devoted to salary will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 7.

The percentage of total revenues devoted to the purchase of equipment will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 8.

The percentage of total revenues received from federal sources will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 9.

Allowable menu patterns will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 10.

The utilization of purchasing cooperatives will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 11.

There will be no significant difference in fiscal efficiency between district self-operated food service programs and district food service programs operated by school food service management companies.

Significance of the Study

South Carolina public school districts have a long history of providing quality meals that are nutritious to students through self-operated programs that have always been well received by their communities. These programs have been responsive to the schools' educational schedules and programs in order to assist wherever and whenever possible with as much concern for the schools' programs and activities as for the need to be entirely self-supporting.

In South Carolina, school food services programs are not allowed to make a profit. They are also restricted to an operating balance not to exceed the cost of operation for three months. This has strong implications both for lunch pricing and for motivation for fiscal efficiency.

As an administration reviews their current food service operation to evaluate its fiscal efficiency, some long-standing practices may have to be significantly changed to make the program more competitive. For example,

some food service programs currently work with the district transportation programs to help school bus drivers secure sufficient working hours each day to qualify for fringe benefits. The school food service program then must pay part of these fringe benefits. School food service managers typically work under the supervision of school principals at each school, a practice that helps to ensure that the food service program will be responsive to the unique programs at each school, at times to the expense of the efficiency of the food service program. These practices, along with many others that are likely to be identified in the study, could be recommended for change. Also, this study may give some insight into how the objective to make the food service programs more efficient can be accomplished and, at the same time, keep the major attributes of the current programs that have been the hallmark of a historically well received community program.

Delimitations of the Study

The study was restricted to the school food service programs in South Carolina and their financial operation for the 1996-97 and 1997-98 fiscal years. Audited financial statements from each school district in South Carolina were obtained from audit reports filed with the South Carolina State Department of Education. These data were used because all school districts are required by the South Carolina State Department of Education to file by December 31 each

year, an audit of their finances completed by an independent audit firm. The audit must be conducted and reported using South Carolina State Department of Education guidelines and generally accepted governmental accounting standards. No data were secured directly from school districts, since to do so would not ensure data reported or analyzed in a comparable way.

From the financial data a variable named BLPSTU (Bottom Line per Student) was derived. This variable reflected the difference between total revenue (RTOT) and total expenditures (ETOT), excluding fringe benefits expenditures and transfers, divided by the district's 35th day enrollment. Fringe benefits and transfers were excluded because these expenditures may be applied in different ways from district to district. A district's 35th day enrollment is the unduplicated student enrollment for all schools in South Carolina. Once a student has been enrolled in a school for 35 consecutive days in South Carolina, the student is considered to have been enrolled in that school for the entire year and may not be counted in another South Carolina school for 35th day enrollment data. BLPSTU, because fringe and transfers were excluded, does not measure a district's profit or loss in the food service program.

Much of the graphic information in this study was presented using scatterplots. Scatterplots were used to show patterns of correlation. However, correlation should not be interpreted as implying causality.

The eight school districts that made up Orangeburg County during fiscal year 1997 were consolidated into three districts in fiscal year 1998. The

consolidation itself may have skewed figures for these districts in fiscal year 1998. Also, some advance knowledge of the impending consolidation may have impacted fiscal decisions district management made in fiscal year 1997. Therefore, for purposes of this study, data from Orangeburg school districts were not used for comparative purposes across years.

Definition of Terms

A la carte: Any food sold through a school food service program that does not qualify as a reimbursable meal within the guidelines of the National School Breakfast and Lunch Program.

District: A short single-word term used to refer to a public school district organized for the purpose of providing a public elementary and/or secondary education to children in a community.

Elementary School: Schools listed in the 1997-98 Directory of South Carolina Schools as an elementary school. The school may have any combination of grades from kindergarten through eighth grade that sought accreditation from the State Department of Education as an elementary school.

Fiscal Year: A period of twelve consecutive months over which all financial records are accounted for as a year. In South Carolina the fiscal year of a public school district begins July 1 of a calendar year and ends June 30 of the next calendar year.

Food Service Fund: All money that comprises the revenues and expenditures of a food service program.

Food Service Management Company: (FSMC) A commercial enterprise or a nonprofit enterprise that provides management or management consultant services to manage a public school or private school food service program.

Food Service Program: The program operated in a public school district to prepare and serve breakfast and lunch to students each school day.

Retained Earnings: The difference between the assets and liabilities of a fund.

General Fund: The fund used to finance the day-to-day operations of the school district.

High School: Schools listed in the 1997-98 Directory of South Carolina Schools as a high school. The school may have any combination of grades from seventh grade through twelfth grade that sought accreditation from the State Department of Education as a high school.

Indirect Cost: Costs not directly charged to the food service fund but charged to another school district fund to pay for part of the expenses associated with operation of the food service program.

Instructional Day: The amount of time each day devoted exclusively to instruction. Class change time, lunch periods, recess, homeroom time and other non-instructional activities are not included as a part of the instructional day.

Middle/Junior High School: Schools listed in the 1997-98 Directory of South Carolina Schools as a middle or junior high school. The school may have any combination of grades from fifth through tenth grade that sought accreditation from the State Department of Education as a middle/junior high school.

Special Sales: Income received from sales to students and adults for extra food items.

Design of the Investigation

All data used in this study were taken from South Carolina School District Audit Reports for fiscal year 1997 and fiscal year 1998, South Carolina Education Profiles, fiscal years 1996-97 and 1997-98; and from South Carolina State Department of Education, Office of School Food Service, Food Services Reports for these years. The information extracted from these reports and used as variables in the study included Free and Reduced Lunch Percentage (FR), Total Revenues (RTOT), Total Expenditures (ETOT), Lunch Average Daily Participation (LADP), Breakfast Average Daily Participation (BADP), Special Sales to Students (SPECIAL), Management Model (MGT), Percentage of Revenue Devoted to Capital Outlay (COPCT), Percentage of Revenue Devoted to Salary (SALPCT), and Bottom Line Per Student (BLPSTU).

Pearson Correlational analyses were conducted to determine relationships among the variables for each of the two years considered. A separate analysis

examined the contribution of each of the other variables to BLPSTU (Bottom Line per Student), which was used in this study as a measure of fiscal efficiency. Each independent variable was considered while controlling for all other independent variables. The impact of belonging to a food-purchasing cooperative was also considered for each of the two years. Since allowable meal patterns changed between the two years, BLPSTU (Bottom Line per Student) was compared across the two years based upon the assumption that changes in meal patterns were the proximate cause of any significant difference statewide between BLPSTU (Bottom Line per Student) means for the two years.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Literature reviewed for this study was selected after an examination of journals related to public school food service and food service management. Also reviewed were documents from the Education Resources Information Center (ERIC), reports and documents produced by the South Carolina Department of Education, Office of School Food Services, and other state and national sources.

Emphasis for the literature review was placed upon documents, papers, articles, books, and other published materials that were related to the efficiency of school food service programs and/or how they are financed. Generally, the literature reviewed was published after 1988 except for literature necessary to give a proper historical perspective to the food service program.

Food Service Policy , Legislation, and Funding

South Carolina has a rich history as a participant in food service programs for public school students. South Carolina became a leader in providing children

with school lunches when a statewide school lunch program was developed in 1933. During this same period federal aid was just beginning. The Reconstruction Finance Corporation began granting loans to towns in southwestern Missouri to pay for the cost of labor to prepare school lunches. The Civil Works Administration and the Federal Emergency Relief Administration expanded this assistance into 39 states in 1933 and 1934. With federal support emerging, by 1937 fifteen states had passed legislation authorizing schools to operate lunch programs (Bureau of Agricultural Economics, Publication No. 467).

Ten years later, in 1943, South Carolina was still a leader in school food service legislation among the states. Three years before the National School Lunch Act was passed in 1946, the South Carolina State Legislature passed a school lunch act providing for school lunches in the public schools of South Carolina.

In 1954 the Special Milk Program was passed to ensure that fluid milk would be available to schoolchildren. Twelve years later in 1966, the federal government passed a second major piece of legislation, the Child Nutrition Act. The Child Nutrition Act expanded and extended the Special Milk Act, established the School Breakfast Program, and for the first time provided funds for free and reduced price meals to needy children. This Act recognized the relationship between good nutrition and the ability of children to learn and stated the following:

> ....based on the years of cumulative successful experience under the National School Lunch Program with its significant contributions

> in the field of applied nutrition research, it is hereby declared to be the policy of Congress that these efforts shall be extended, expanded and strengthened under the authority of the Secretary of Agriculture as a measure to safeguard the health and well-being of the Nation's children, and to encourage the domestic consumption of agricultural and other foods, by assisting states, through grants-in-aid and other means, to meet more effectively the nutritional needs of our children (Child Nutrition Act of 1966, Section 2).

Section 13 of the Child Nutrition Act provided the authority for all preschool, elementary and secondary school programs to be consolidated and placed under the general supervision of the United States Department of Agriculture, where it remains today.

In 1975 Public Law 94-105 was enacted. This act continued provisions of the National School Lunch and Child Nutrition Act, and for the first time mandated reduced price meals to children who qualified. The act also increased the U.S. Department of Agriculture's power to purchase and distribute commodities.

Legislation passed in 1980 by the federal government reduced funding for the Child Nutrition Programs. These reductions included less funding for meals served and a reduction in commodities received by school districts. With passage of the Omnibus Reconciliation Act, the equipment assistance program to schools was eliminated; the special milk program was eliminated; and funding was decreased for children who were not eligible for free or reduced price meals. Total funding reductions in fiscal year 1981 were approximately $400 million, and the cut was even larger in fiscal year 1982 as a result of the Omnibus Budget Reconciliation Act. Congress attempted to restore some funding between 1983

and 1985, but was not successful until 1986. According to the American School Food Service Association, when commodities were counted with federal school lunch support, federal support for the program declined from 39 percent in 1981 to 13 percent in 1993. Of the distribution of cash assistance provided for meals and milk, 82 percent was allocated to free and reduced price meals and 18 percent to support full pay meals (ASFSA, 1997).

Most recently federal legislation has concentrated on making school lunches more nutritious and healthy for schoolchildren. Public Law 103-448, passed in 1994, the Healthy Meals for Healthy Americans Act, provided for menu options based on nutrient content of the meal rather than the food items included in the meal. These meal-planning patterns replaced the Traditional Meal pattern and were called the Nutrient Standard Menu and Assisted Nutrient Standard Menu. In addition the Department of Agriculture also approved a Food Based Menu that increased the number of bread/grains and fruits/vegetables that had to be included if the Nutrient Standard Menu was not used.

In 1997 Public Law 104-149, the Healthy Meals for Children Act, increased the meal planning options with the "any reasonable approach" provision to give local school food service planners more flexibility. This act focused on the appropriate RDA requirements for different age groups and required that school meals be composed of not more than 30 percent of the calories from fat and that less than 10 percent of the calories be from saturated fat. By changing the standard to "any reasonable approach," the Healthy Meals

for Children Act also provided for the Traditional Meal pattern to be used again in menu planning.

Private Food Service Management Companies

Some school districts, in an effort to cope with the pressures of insufficient federal funding for school food service programs and the need to provide a self - supporting food service program in the modern competitive schools of today, have resorted to the use of food service management companies (FSMCs). As a result by 1990, a sufficient number of school districts had contracted with food service management companies to cause the United States Department of Agriculture to contract with Price Waterhouse to complete a study of the use of food service management companies. Most school districts contracting with management companies were located on the West Coast, in the Midwest, Texas, and in the Northeast region of the nation. States outside of these areas of the nation had five or fewer districts using management companies. Entitled "Study of Food Service Management Companies in School Nutrition Programs," the study analyzed all aspects of the contracts used by management companies as they related to the policies and requirements of the National School Lunch Program. The study made no attempt to compare management company operated programs with self- operated programs.

The study found that in fiscal year 1990-91, of the 12,898 public and 3,381 private school districts participating in the National School Lunch Program, 905 districts used management companies to operate their programs as compared to 839 districts in fiscal year 1987-88. Only three states in the South had districts that used management companies. The study noted that states with a high concentration of districts using management companies tended to be states that had numerous small school districts rather than larger districts. Most public school districts using management companies had student enrollments between 1,200 and 5,000 students. Management companies operated in one or more school districts in 33 states in the 1990-91 school year (Price Waterhouse, 1994).

The number of districts contracting with management companies appears to have peaked in the decade from 1979 to 1989. During this period of time more districts began contracts in 1989 than in any other year, peaking at approximately 8% of the contracts. By 1990, when the Waterhouse study was conducted, the number of districts beginning contracts had decreased to approximately 3% (Price Waterhouse, 1994).

The School Administrator magazine addressed the issue of private management companies in May 1994 with two published articles, one promoting the use of management companies and the other defending the merits of a self-operated program. The two school administrators who wrote the articles simply related their experiences. Neither article contained strong defendable data to

support the author's position but used instead their personal experience with district programs. However, commenting on the debate of private management versus self-operated programs, the magazine's editor noted that in 1994 about 1000 U.S. school districts were using private management companies to operate food service programs.

The American School Food Service Association, in its report School Foodservice Industry External Environmental Scan, observed that most districts choose to enter into contracts with management companies because they believe that substantial amounts of money can be saved. They believe money can be saved because they no longer have to pay salaries and fringe benefits to employees or worry about the management of food service employees. However, districts often find that the private management company is unable to solve their budget problems and they return to their self-operated system (ASFSA, 1997).

The literature is abundant with both advocates and opponents of contracted management for public school food service programs. Those who advocate privatization believe professional management companies offer an effective means for reducing cost, improving productivity, delegating management responsibilities, and increasing accountability. Critics of privatization tend to see management companies as an attempt by private companies to siphon from the public hard earned local dollars that belong in the community. They believe privatization is a movement away from publicly owned

institutions to private operations that have no real interest in the welfare and education of children.

Nancy Backas, in her article "Great Debate" published in the January 1995 issue of School Food Service & Nutrition, summarized the debate very well.

> Proponents of contracting out foodservices say they want to let the "foodservice experts" concentrate on what they do best and let schools concentrate on educating students. It's no surprise that this kind of attitude angers school foodservice directors who are, quite obviously, foodservice experts. On the defensive, these directors are using words like "corporate takeover," and argue that school foodservice is an integral part of the learning process that provides unique educational support to the school system. It's no wonder the two sides are squaring off (Backas, 1995).

Much of the literature about private management companies is written in the professional publications of state school food service associations. The language is generally strong and devoted to the opposition of private management companies. To understand the flavor and focus of most of these articles one could compare them to articles that often appear in anti-labor union literature. For example, in the School Food Service Journal, September 1990 issue, a feature article (p. 62) is entitled "When Contract Management Came to West Virginia, State association members take their stand on what is best for child nutrition programs." The article outlines the West Virginia School Food Service Association's campaign to prevent the "takeover" of the Hancock County food service program by a management company. In the end when the "takeover" had failed, the article hailed their "victory" and "success" in keeping the private management company out.

Articles like the one described above certainly give a flavor for the emotional side of the issue of private management versus self-operated programs, but do little to delineate the bottom line financial facts. Such articles fail to provide definitive data as to whether privately managed food service programs are more efficient and effective than self-operated programs.

David N. Ammons addressed this concern in his article, "Taking A Pragmatic View of Privatization," in the Winter 1998 issue of Forum, published by the Institute of Public Affairs, University of South Carolina. His article called for a balancing of the ideological perspectives and made the point with the following statement:

> The debates that take place in city halls, county courthouses, and legislative chambers are often dominated by perspectives that contrast sharply with one another and rest on preconceived notions regarding the presumed superiority of one sector's skills or the other's motives. When the argument pits privatize-as-much-as-possible zealots against their privatize-nothing opponents, more pragmatic views sometimes are shoved to the sidelines (Ammons, 1998).

Ammons continued his article by pointing out that when a government decides to privatize, the decision to privatize does not relieve the government from responsibility or the liability of the operation. Ammons suggested that two lessons are embedded in what he called "The Allure of Contracting."

> The first lesson is that a good contract operation can probably beat a poorly managed in-house operation, and a well-managed in-house operation can probably beat a poorly managed or exorbitantly priced contract operation. Case studies are rarely random. The most interesting cases describe dramatic results, the kind that are most likely when the need for improvement is greatest.

> A good operation, whether in-house or contractual, is less likely to be targeted for change than one that is struggling. A change from a poor example of the current mode of operation -- either in-house or contractual -- to a good example of the other mode will produce the dramatic results that make a good story.
>
> The second lesson flows from the first: do not place too much faith in isolated studies focusing on single jurisdictions. They can be misleading. It is unwise to abandon a good contract on the strength of a case study touting an in-house success. It is equally unwise to get caught up in the wave of enthusiasm for privatization and abandon a good in-house operation (Ammons, 1998).

Ammons pointed out that the key to privatization is competition. Privatization is driven by competition, but he pointed out when a government operated program is managed aggressively and given the flexibility to operate competitively the government operated program can outperform or match its rivals.

Drs. June Schmieder, Sue McCann, and Arthur Townley, in a 1996 study "Privatization of School Food Services and Its Effect on The Financial Status of The Cafeteria Fund in Participating California Public School Districts," wrote the following:

> School food services is appealing to food service management companies because most kitchen facilities are in place, buildings have been built, the majority of capital outlay has already been expended, the operation comes with an adequate staff, and there is room for improvement. Most procedures are in place so that all the private company needs to do is to step in and make a few high visibility improvements which are charged back to the district through a per meal cost for consulting services and a per meal cost for general administrative and operating services.

Schmieder, McCann, and Townley used in their study two sets of school districts. One set was composed of programs operated by management

companies and the other set was composed of programs operated by the districts. Districts selected for each set had comparable student enrollments, numbers of schools, and similar types of school districts. The researchers found that of the districts in their study using food service management companies, 38 percent had decreased retained earnings at the end of the year and 55 percent had increased retained earnings. By comparison, of the districts running self-operated programs, 28 percent had decreased retained earnings at the end of the year and 66 percent had increased retained earnings. They found from the study that self-operated districts performed better than districts operated by management companies, but concluded that some private companies met with success. Other management companies are released from their contracts after a trial run. The qualitative degree of success was difficult to measure. Improving meals, bringing in new ideas, increasing student satisfaction, or contracting additional personnel (e.g. private company's managers, consultants, advisors) can be defined as success and varies among participating districts. The survival or number of years that a school district retains the services of a private company can also be an indication. However, according to Schmieder, McCann, and Townley, the most cited reason for seeking a private company was to run a more efficient operation that is not a financial drain on the general fund of the school district.

The U.S. Congress included in the Healthy Meals for Healthy Americans Act of 1994 a mandate that a review be made of the use of private food

companies by school districts that participate in the federal meals programs. As part of the study, the General Accounting Office researched the use of food management companies by school districts to determine their impact on the National School Lunch Program.

The study found that in 1994-95 about eight percent of the food service authorities nationwide used food service management companies, up four percent since 1987-88. The most often cited reason for using a private company was to reduce budget deficits and increase revenues. After using a management company, 61 percent of the districts reported an improvement and 19 percent reported operating at a deficit. However, the study found that programs operated by food service management companies faired about the same as self-operated programs with regard to budget deficits. In terms of student participation, the study found that while management operated programs improved student participation overall, student participation was still lower for programs operated by management companies than for self-operated programs. Student participation in programs operated by management companies was found to be about 49 percent as compared to about 65 percent in self-operated programs (GAO, 1996).

Much of the literature associated with management company operated programs addresses issues related to employees. The GAO study found that about 43 percent reported that most or all of their employees were retained as employees of the district while 32 percent reported that employees lost their jobs

with the district but were re-employed by the management company (GAO, 1996).

South Carolina's Office of School Food Services

Working through and with the USDA, the South Carolina State Department of Education has developed a very sophisticated Office of School Food Services to support and provide training for school food service managers in South Carolina's public school districts. The office is composed of a staff of approximately 18 staff members to provide support to school districts in marketing programs, nutritional analysis of food, procurement of food and supplies, technology training, and other related food service training and support.

In 1997-98 all public schools in South Carolina participated in the state food service program and served more than 76 million lunches or about 437,000 lunches each school day. During this same period approximately 150,000 breakfast meals were served each day. On an average school day in 1997-98, about 68 percent of the students enrolled in the state's public schools participated in the school lunch program and about 24 percent participated in the breakfast program. Of all students participating in 1997-98, approximately 49 percent qualified for free and reduced price meals (Office of School Food Services, 1998).

South Carolina, as does other states, requires local school districts to complete agreements each year with the state to ensure that their food service

programs will comply with federal regulations governing the Child Nutrition Programs. The application requires that school districts list the schools participating in the program, the grade levels served, the type of operation, compliance with offer versus serve provisions, and the meal option that will be implemented. In South Carolina, school districts are required to select for each school one of four options. Schools may elect the Enhanced Food Based option, NuMenus option, Assisted NuMenus option, or the Traditional Food Based option. The School Lunch, Breakfast, and Food Distribution Agreements between the state and the school districts are legal agreements to which school districts agree:

- to serve a lunch/breakfast that meets the meal requirements;
- maintain proper sanitation and health standards in conformance with all applicable state and local laws;
- comply with record keeping requirements;
- provide free and reduced-price meals to eligible children;
- provide meals to all children without regard to race, color, gender, religion, disability, age or national origin;
- comply with financial requirements and provisions;
- accept and use commodities; and
- operate the program on a nonprofit basis (Office of School Food Service, 1998).

A copy of the Lunch, Breakfast and Food Distribution Agreement is included in the Appendix of this study. Also included in the Appendix are documents taken from the State Department of Education, Office of School Food Service Program Reference Manual that detail the differences among the different types of meal patterns or meal options a district may select. Meal patterns are important because they determine the amount of food that must be

served and therefore the expense ultimately incurred for food. For example, the Nutrient based meal, as defined in the literature, is not as likely to require as much food to be served as would be required by the Traditional meal to meet minimum guidelines.

The federal government, when authorizing the National School Lunch and School Breakfast Programs, recognized that when meals are controlled for nutrient content, restrictions should be placed on meals that are not controlled. As a result school districts have the authority to limit or regulate the sale of foods that compete with the food service program.

South Carolina's Program Reference Manual contains the following Competitive Food Service Policy.

> School districts have the authority to establish rules or regulations as are necessary to control the sale of foods in competition with meals served under the National School Lunch and School Breakfast Programs. Such rules or regulations must prohibit the sale of foods of minimal nutritional value in the foodservice area during the breakfast and lunch periods. The four food categories of minimal nutritional value (soda water, water ices, chewing gum, certain candies) ....may be sold, at the discretion of local school officials in other areas of the school campus throughout the school day.
>
> USDA policy defines food service areas as "areas on school premises where program meals are either 'served' or 'eaten' and sale of minimal nutritional value foods including carbonated beverages are prohibited in these areas." Student access to these items in areas where meals are provided is considered a violation of the competitive foods rule.

To further strengthen the Competitive Food Policy, the State Legislature passed in 1990, Proviso 28.100 of the Appropriations Act that required the State Board of Education to develop policies regarding foods that would be available to students during the school day. The proviso required that the policy be based on the United States Dietary Guidelines for Americans and the requirements of the National Child Nutrition Program. The policy included the following provisions:

Beginning School Year 1990-91

- All food made available for sale or service to students in the elementary, middle and junior high schools during the school day* should be consistent with the USDA/DHHS dietary guidelines and the Child Nutrition Program requirements.

*School day is defined as follows: Beginning with the breakfast program and through the instructional day or when the first bus arrives and through the instructional day.

Beginning School Year 1994-95

- In order to encourage students to adopt and maintain healthy life-styles which promote wellness and prevent diet related diseases, all schools by school year 1994-95 should provide only foods and beverages to students during the school day* which meet the U.S. Department of Agriculture (USDA) Department of Health and Human services (DHHS) Dietary Guidelines and/or the nutritional requirements of the Child Nutrition Programs (National School Lunch and Breakfast Programs).
- By 1994-95 school year, when a high school operates a canteen, concession stand or vending program, all food and beverages should be healthy food choices as identified by USDA dietary guidance (SC Office of School Food Services, 1998).

Implementation of these policies has been left primarily to school districts with little if any enforcement from the Office of School Food Services.

Other Related Literature

Dorothy Pannell, a nationally known expert in food service management and president of inTEAM Associates, has written extensively about school food service efficiency. The last edition of her manual, Cost Control Manual for School Food Service Directors (1994), that was initially funded by the Kentucky Department of Education, Division of School and Community Nutrition and the State Administrative Expense Fund, has been used extensively for food service seminars she conducts. The manual is devoted to topics such as labor costs, food costs, reducing costs, and increasing revenue. All of these topics are extremely important in order for a food service manager to effectively contain costs in a food service program, and they can be of valuable assistance in areas where inefficiencies have been identified or for generally studying an individual program.

However, for purposes of this study, of particular interest were recommendations included in the manual for staffing school cafeterias, since the State Department of Education, Office of School Food Services, provided no statewide data for staffing patterns based on meals per labor hour. Such data may be of significance because local labor markets drive salaries, but not production. Exhibit 17 of the Cost Control Manual for School Food Service Directors recommended the following guidelines as shown in Table 2-1.

Table 2-1 Guidelines for On-Site Production

Number of Equivalents*	Meals per Labor Hour (MPLH)/Total Hours Conventional System** MPLH	Total Hours	Convenience System*** MPLH	Total Hours
Up to 100	8	9 to 12	9	9 to 11
101 to 150	9	12 to 16	10	11 to 14
151 to 200	10 to 12	16 to 17	12	14 to 16
201 to 250	12	17 to 20	14	16 to 18
251 to 300	13	20 to 22	15	18 to 20
301 to 400	14	22 to 29	16	20 to 25
401 to 500	14	29 to 35	18	25 to 28
501 to 600	15	35 to 40	18	28 to 34
601 to 700	16	40 to 43	19	34 to 37
701 to 800	17	43 to 47	20	37 to 40
800+	18	47+	21+	40+

*Meal equivalents include breakfast and a la carte sales. Two breakfasts equate to one lunch. A la carte sales of $2.00 equate to one lunch.

**The conventional system is preparation of food from raw ingredients on the premises (using some bakery bread and prepared pizza and washing dishes).

***The convenience system is using the maximum amount of processed foods (for example, using all bakery breads, pre-fried chicken, and proportioned condiments, using disposable dishes).

Adapted from: Pannell, School Foodservice Management (Ban Nostrand Reinhold, 1990)

(Pannell, 1994, Exhibit 17, p. 43)

The above guidelines were introduced in the manual with the following statement: "The staffing guidelines in Exhibit 17 are provided on the basis of the average automated equipment that was commonly used in the late 1980s and early 1990s. It works!"

CHAPTER III

DESIGN AND METHODOLOGY

This study was designed to identify characteristics of public school food service programs that are associated with and/or significantly impact a program's fiscal efficiency. Characteristics of interest fell into three broad categories:

1. Demographic Characteristics: The demographic profiles of a district's student population are considered by experts in the field to exert significant influence over a school district, including the district's school food services operation. Generally, school districts are considered to have very little control over demographic factors. Also, the role of the federal government in public school food service financing and, in particular, the federal reimbursement to districts for free and reduced lunches served was considered a dominant demographic factor because the percentage of free and reduced price lunches served among the different school districts varied significantly.
2. Operational Characteristics: These topics included menu patterns, relative emphasis on reimbursable meals, special sales, levels of student participation, salary levels, equipment purchases, and utilization of purchasing cooperatives.
3. Management Models: Management models were separated into two general classifications: district operated programs and food service management company operated programs.

The study was designed as a *post hoc* study. All data used in this study were extracted from District Audit Reports filed with the South Carolina Department of Education, Office of School District Auditing; from the South Carolina Department of Education, Office of School Food Services, Lunch and Breakfast Average Daily Participation Reports for 1996-97 and 1997-98; and from South Carolina Education Profiles, 1997 and 1998. Audit Reports were obtained for all 91 South Carolina public school districts for fiscal year 1997. Consolidation reduced the number of South Carolina public school districts to 86 for fiscal year 1998. Four of the 86 districts had not filed an approved fiscal year 1998 District Audit Report with the South Carolina Department of Education, Office of School District Auditing, as of February 8, 1999, the date when reports were obtained for this study. Consequently, the fiscal year 1998 data used in the study includes only 82 districts.

Analyses were conducted separately for each of the two fiscal years. Therefore, the possibility existed for some hypotheses to be supported by data from one year but not from the other year. Consequently, cross-year consistency was an important aspect of evaluating each research question.

Description of Variables

While South Carolina Audit Standards defined much of what was contained in each School District Audit Report, differences remained among the reports that if not adjusted would have substantially skewed the data. The greatest differences existed among fringe benefits reporting. Each district received state revenue for a substantial portion of the fringe benefits for school food service workers. Some districts placed the fringe benefits revenue in their food services accounts and reported the revenue as a line item on their Food Services Schedule of Revenues. Others placed the fringe benefits revenue in their general fund and never reported the revenue as being associated with food services. Still other districts placed the fringe benefits revenue in their general funds and then reported the revenue as a transfer between funds. As an expenditure, some districts showed all fringe paid to food service workers on their Food Services Schedule of Expenditures. Typically these were districts that also reported fringe benefits revenue for food services and/or showed a transfer from their general fund. Other districts showed only a portion of the fringe paid to food service workers on their Food Service Schedule of Expenditures and showed the remainder on General Fund Expenditure Schedules. Still other districts reported no food service worker fringe on the Food Services Expenditure Schedule. Because of the inconsistencies involved, all fringe revenues and expenditures were removed for purposes of this study. Revenue specifically attributed to "Canteen" either as revenue or as a transfer was also excluded.

Common among districts whose food services operation ran a deficit was to show a supplement to the food services operation with a transfer from another fund (general fund, capital outlay, etc.) At the other extreme were districts that charged indirect cost to food services. This indirect cost was shown as a transfer from food services to the general fund. Both types of transfers were removed for purposes of this study.

The following variables were used in the study:

Variable	Description
FR	Free and Reduced Lunch Percentage for district
LADP	Lunch Average Daily Participation
BADP	Breakfast Average Daily Participation
MGT	Management Type; 1=FSMC, 0=District Managed
SPECIAL	Special Sales to Students as percentage of Total Sales to Students
AVSIZE	Average Size of Schools in district; 35-Day Enrollment divided by number of schools in district excluding vocational centers
RTOT	Total Revenues; Total revenues excluding fringe (Object 3180) and canteen (Object 1992)
ETOT	Total Expenditures excluding fringe (Object 200) and transfers to/from other funds (Indirect Costs, etc.)
BLPSTU	Bottom Line Per Student. Total Revenues less Total Expenditures divided by district 35-Day Enrollment
SALPCT	Percentage of Total Revenues devoted to salary

FEDPCT Percentage of Total Revenues from Federal Sources

COPCT Percentage of Total Revenues devoted to Capital Outlay

BLPSTU (Bottom Line Per Student), which represents Total Revenues (excluding fringe and canteen) less Total Expenditures (excluding fringe and transfers) was used in this study as a measure of fiscal efficiency. While BLPSTU is technically not a measure of profit or loss because of exclusions in RTOT (Total Revenues) and ETOT (Total Expenditures), it provided an excellent measure of fiscal efficiency for comparing districts.

Statistical Procedures

Pearson correlations were computed among all of the variables in the study for each fiscal year. These correlations established the relationships involved and offered insight into colinearity problems in other statistical procedures. Separate correlation analyses were also conducted on all variables except MGT (Management Type) for districts that had district operated food service programs and for districts that had food service management company operated programs for each of the two fiscal years.

F-tests were conducted using BLPSTU (Bottom Line Per Student) as the dependent variable and each of the other variables as independent variables. The significance of each independent variable was evaluated while controlling for all other independent variables.

A related sample t-test was conducted using BLPSTU (Bottom Line Per Student) from fiscal year 1997 and fiscal year 1998 for the 79 districts that had measures for both years. The three consolidated Orangeburg County districts in fiscal year 1998 were excluded since they were eight separate districts in fiscal year 1997.

Independent sample t-tests were conducted for each pairwise contrast of purchasing consortium membership status for both fiscal year 1997 and fiscal year 1998 using BLPSTU as the dependent variable.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The research question formulated was: "What characteristics are associated with and/or significantly impact the fiscal efficiency of public school food service programs in South Carolina?" To assist in answering the question, 11 hypotheses were constructed for testing. The hypotheses were as follows:

Hypothesis No. 1

The percentage of students approved for free or reduced lunch will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 2.

The percentage of total student sales that are special sales will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 3.

The percentage of lunch daily participation will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 4.

The percentage of breakfast daily participation will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 5.

The average size of schools within a school district will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 6.

The percentage of total revenues devoted to salary will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 7.

The percentage of total revenues devoted to the purchase of equipment will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 8.

The percentage of total revenues received from federal sources will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 9.

Allowable menu patterns will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 10.

The utilization of purchasing cooperatives will have no significant impact upon the fiscal efficiency of school food service operations.

Hypothesis No. 11.

There will be no significant difference in fiscal efficiency between district self-operated food service programs and district food service programs operated by school food service management companies.

Table 4-1 contains correlational information for each of the variables in the study for fiscal year 1997. Table 4-2 contains the same information for fiscal year 1998.

Table 4-1
Descriptive Data for Variables in Study, FY '97

Variable	All Districts			FSMC Operated			District Operated		
	N	Mean	Standard Deviation	N	Mean	Standard Deviation	N	Mean	Standard Deviation
FR	91	58.035165	20.389618	10	35.770000	9.749764	81	60.783951	19.682279
LADP	91	73.296703	10.263738	10	72.400000	7.763161	81	73.407407	10.565010
BADP	91	30.659341	13.071785	10	20.200000	4.984420	81	31.950617	13.193655
MGT	91	0.109890	0.314485	10	1.000000	0.000000	81	0.000000	0.000000
SPECIAL	91	24.936264	13.742485	10	18.410000	8.985229	81	25.741975	14.049874
AVSIZE	91	601.065934	188.492546	10	609.200000	137.443160	81	600.061728	194.515124
BLPSTU	91	8.488390	22.754081	10	-4.982946	19.301646	81	10.151518	22.695138
SALPCT	91	35.263736	7.316838	10	22.430000	12.180773	81	36.848148	4.517358
FEDPCT	91	69.436264	14.322954	10	55.540000	8.315073	81	71.151852	13.996206
COPCT	91	3.354945	2.114356	10	2.680000	1.600555	81	3.438272	2.162670

Table 4-2
Descriptive Data for Variables in Study, FY '98

Variable	All Districts			FSMC Operated			District Operated		
	N	Mean	Standard Deviation	N	Mean	Standard Deviation	N	Mean	Standard Deviation
FR	82	55.104878	19.097559	9	36.933333	10.258899	73	57.345205	18.768273
LADP	82	71.682927	9.465829	9	70.666667	5.590170	73	71.808219	9.858242
BADP	82	29.536585	12.262756	9	20.888889	5.182771	73	30.602740	12.477468
MGT	82	0.109756	0.314509	9	1.000000	0.000000	73	0.000000	0.000000
SPECIAL	82	25.678049	13.644436	9	18.533333	10.626618	73	26.558904	13.774419
AVSIZE	82	603.585366	185.406457	9	630.777778	135.797439	73	600.232877	191.101233
BLPSTU	82	18.606423	23.133917	9	6.491093	12.138583	73	20.100094	23.771706
SALPCT	82	34.724390	7.546932	9	18.888889	10.438683	73	36.676712	4.093712
FEDPCT	82	68.447561	14.374448	9	56.266667	8.907581	73	69.949315	14.240905
COPCT	82	3.018293	2.127082	9	1.977778	1.410477	73	3.146575	2.171858

Table 4-3 contains Pearson correlations and probabilities among all variables of the study for fiscal year 1997 for all 91 public school districts that were operating in South Carolina during 1996-97.

Table 4-3
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1997
All South Carolina Public School Districts

FR	1.0000 0.0000									
LADP	0.7100 0.0001	1.0000 0.0000								
BADP	0.8767 0.0001	0.7368 0.0001	1.0000 0.0000							
MGT	-0.3858 0.0001	-0.0309 0.7715	-0.2827 0.0066	1.0000 0.0000						
SPECIAL	0.0382 0.7190	-0.3253 0.0017	0.0034 0.9748	-0.1678 0.1119	1.0000 0.0000					
AVSIZE	-0.3915 0.0001	-0.4416 0.0001	-0.5187 0.0001	0.0153 0.8859	0.0213 0.8413	1.0000 0.0000				
BLPSTU	0.0397 0.7090	-0.1238 0.2422	-0.0446 0.6746	-0.2092 0.0466	0.3137 0.0025	0.2347 0.0251	1.0000 0.0000			
SALPCT	0.1886 0.0735	-0.0301 0.7773	0.1276 0.2282	-0.6197 0.0001	0.0175 0.8691	-0.0957 0.3667	-0.1308 0.2167	1.0000 0.0000		
FEDPCT	0.9520 0.0001	0.6876 0.0001	0.8141 0.0001	-0.3428 0.0009	-0.0672 0.5268	-0.3672 0.0003	0.0057 0.9576	0.1688 0.1096	1.0000 0.0000	
COPCT	0.2613 0.0123	0.1901 0.0711	0.2310 0.0276	-0.1128 0.2871	0.0963 0.3637	-0.0870 0.4124	-0.1840 0.0808	0.0836 0.4307	0.2391 0.0224	1.0000 0.0000
	FR	LADP	BADP	MGT	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Table 4-4 contains Pearson correlations and probabilities for all variables of the study for fiscal year 1998 for 82 South Carolina public school districts. For the 1997-98 school year, consolidation had reduced the number of South Carolina public school districts to 86. Of the 86 school districts, at the time of this research, four districts had not filed with the South Carolina State Department of

Education the audit reports from which most of the information in this study was extracted.

Table 4-4
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1998
All South Carolina Public School Districts

FR	1.0000 0.0000									
LADP	0.6942 0.0001	1.0000 0.0000								
BADP	0.8726 0.0001	0.7270 0.0001	1.0000 0.0000							
MGT	-0.3361 0.0020	-0.0379 0.7351	-0.2491 0.0240	1.0000 0.0000						
SPECIAL	0.0861 0.4420	-0.2729 0.0131	0.0904 0.4191	-0.1850 0.0961	1.0000 0.0000					
AVSIZE	-0.5343 0.0001	-0.5895 0.0001	-0.6441 0.0001	0.0518 0.6439	0.0428 0.7029	1.0000 0.0000				
BLPSTU	0.1396 0.2111	-0.0532 0.6350	0.1113 0.3194	-0.1850 0.0961	0.3031 0.0056	0.1478 0.1852	1.0000 0.0000			
SALPCT	0.2235 0.0436	0.0496 0.6579	0.17165 0.1231	-0.7413 0.0001	0.1053 0.3464	-0.1986 0.0736	-0.0971 0.3854	1.0000 0.0000		
FEDPCT	0.9583 0.0001	0.6853 0.0001	0.8101 0.0001	-0.2994 0.0063	-0.0586 0.6010	-0.5093 0.0001	0.0643 0.5659	0.2055 0.0640	1.0000 0.0000	
COPCT	0.2243 0.0428	0.2451 0.0265	0.1992 0.0728	-0.1728 0.1205	0.0654 0.5595	-0.0379 0.7356	-0.2169 0.0503	0.0764 0.4949	0.2337 0.0346	1.0000 0.0000
	FR	LADP	BADP	MGT	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Table 4-5 provides Pearson correlations for the variables in the study for fiscal year 1997 for the 81 district managed school food services programs only. The same correlational information is contained in Table 4-6 for the 10 food service management company operated programs.

Table 4-5
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1997
School District Operated Food Service Programs

FR	1.0000 0.0000								
LADP	0.7787 0.0001	1.0000 0.0000							
BADP	0.8704 0.0001	0.7676 0.0001	1.0000 0.0000						
SPECIAL	-0.0119 0.9157	-0.3290 0.0027	-0.0331 0.7691	1.0000 0.0000					
AVSIZE	-0.4485 0.0001	-0.4500 0.0001	-0.5493 0.0001	0.0368 0.7743	1.0000 0.0000				
BLPSTU	-0.0716 0.5251	-0.1136 0.3128	-0.1193 0.2890	0.3089 0.0050	0.2175 0.0512	1.0000 0.0000			
SALPCT	-0.0387 0.7314	0.0667 0.5543	0.0009 0.9936	-0.1862 0.0961	-0.2321 0.0370	-0.4736 0.0001	1.0000 0.0000		
FEDPCT	0.9456 0.0001	0.7386 0.0001	0.7896 0.0001	-0.1103 0.3269	-0.4207 0.0001	-0.1012 0.3689	-0.0127 0.9102	1.0000 0.0000	
COPCT	0.2467 0.0264	0.2173 0.513	0.2264 0.0421	0.0671 0.5519	-0.1202 0.2853	-0.2612 0.0185	-0.0172 0.8789	0.2272 0.0414	1.0000 0.0000
	FR	LADP	BADP	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Table 4-6
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1997
Food Service Management Company Operated Food Service Programs

FR	1.0000 0.0000								
LADP	0.2857 0.4236	1.0000 0.0000							
BADP	0.7594 0.0108	0.6668 0.0352	1.0000 0.0000						
SPECIAL	-0.5125 0.1299	-0.4604 0.1806	-0.5493 0.1000	1.0000 0.0000					
AVSIZE	0.3300 0.3518	0.3011 0.3978	-0.2104 0.5595	-0.2238 0.5342	1.0000 0.0000				
BLPSTU	0.4998 0.1413	-0.4153 0.2327	0.0919 0.8006	-0.0263 0.9424	0.6294 0.0512	1.0000 0.0000			
SALPCT	-0.3771 0.2827	-0.6896 0.0273	-0.7583 0.0110	0.1652 0.6484	0.3723 0.2894	-0.00834 0.9818	1.0000 0.0000		
FEDPCT	0.9670 0.0001	0.3782 0.2812	0.7700 0.0092	-0.7051 0.0228	0.3577 0.3102	0.4384 0.2050	-0.3804 0.2781	1.0000 0.0000	
COPCT	0.0351 0.9234	-0.2935 0.4105	-0.3003 0.3992	0.3045 0.3923	0.4982 0.1428	0.4552 0.1862	0.1855 0.6079	-0.0315 0.9312	1.0000 0.0000
	FR	LADP	BADP	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Fiscal Year 1998 correlational data for school district managed food service programs (N=73) and for food service management company managed food service programs (N=9) are contained in Table 4-7 and Table 4-8 respectively.

Table 4-7
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1998 School District Operated Food Service Programs

FR	1.0000 0.0000								
LADP	0.7381 0.0001	1.0000 0.0000							
BADP	0.8635 0.0001	0.7475 0.0001	1.0000 0.0000						
SPECIAL	0.0463 0.6974	-0.2709 0.0204	0.06535 0.5828	1.0000 0.0000					
AVSIZE	-0.5897 0.0001	-0.6097 0.0001	-0.6849 0.0001	0.0627 0.5981	1.0000 0.0000				
BLPSTU	0.0753 0.5265	-0.0485 0.6838	0.0663 0.5772	0.2785 0.0171	0.1406 0.2356	1.0000 0.0000			
SALPCT	-0.0006 0.9959	0.1333 0.2608	0.0341 0.7747	-0.1153 0.3312	-0.3585 0.0018	-0.5004 0.0001	1.0000 0.0000		
FEDPCT	0.9549 0.0001	0.7190 0.0001	0.7947 0.0001	-0.0937 0.4302	-0.5593 0.0001	0.0033 0.9778	0.0306 0.7971	1.0000 0.0000	
COPCT	0.1666 0.1590	0.2531 0.0307	0.1561 0.1871	0.0248 0.8352	-0.0548 0.6450	-0.2870 0.0138	-0.1397 0.2384	0.1891 0.1091	1.0000 0.0000
	FR	LADP	BADP	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Table 4-8
Pearson Correlations and Probabilities for Study Variables for Fiscal Year 1998
Food Service Management Company Operated Food Service Programs

FR	1.0000 0.0000								
LADP	0.3180 0.4043	1.0000 0.0000							
BADP	0.9513 0.0001	0.5422 0.1315	1.0000 0.0000						
SPECIAL	-0.4101 0.2730	-0.5892 0.0950	-0.4711 0.2005	1.0000 0.0000					
AVSIZE	0.3614 0.3393	-0.1358 0.7276	0.2371 0.5391	-0.1005 0.7969	1.0000 0.0000				
BLPSTU	0.3504 0.3553	-0.4605 0.2123	0.1640 0.6733	0.3000 0.4329	0.6600 0.0531	1.0000 0.0000			
SALPCT	-0.3467 0.3607	-0.5630 0.1145	-0.5153 0.1557	0.2285 0.5543	0.1794 0.6442	0.1906 0.6234	1.0000 0.0000		
FEDPCT	0.9512 0.0001	0.4022 0.2833	0.9062 0.0008	-0.6432 0.0617	0.3101 0.4167	0.1845 0.6346	-0.3663 0.3322	1.0000 0.0000	
COPCT	0.5011 0.1694	-0.0185 0.9623	0.4305 0.2474	0.2101 0.5875	0.4668 0.2053	0.5480 0.1267	0.1891 0.6262	0.2951 0.4407	1.0000 0.0000
	FR	LADP	BADP	SPECIAL	AVSIZE	BLPSTU	SALPCT	FEDPCT	COPCT

Table 4-9 and Table 4-10 provide the inferential information needed to determine whether to accept Hypotheses 1, 2, 3, 4, 5, 6, 7, 8 and 9. These tables provide inferential information about the independent variables FR, LADP, BADP, MGT, SPECIAL, AVSIZE, SALPCT, FEDPCT, and COPCT. Each of these variable names was defined in Chapter III. Each independent variable is considered controlling for all other independent variables. The Dependent

Variable is BLPSTU (Bottom Line Per Student). BLPSTU is used in this study as a measure of fiscal efficiency.

Table 4-9
Independent Variables from Fiscal Year 1997 Data Influencing Bottom Line Per Student

Independent Variable	Standard Error	F	Prob > F
FR	0.46690274	0.26	0.6127
LADP	0.38808282	0.19	0.6633
BADP	0.38397483	0.52	0.4746
MGT	9.68209868	7.91	0.0062
SPECIAL	0.19451065	6.05	0.0161
AVSIZE	0.01364104	3.15	0.0799
SALPCT	0.37761963	7.87	0.0063
FEDPCT	0.52187013	0.02	0.8951
COPCT	1.03797530	5.76	0.0187

Table 4-10
Independent Variables from Fiscal Year 1998 Data Influencing Bottom Line Per Student

Independent Variable	Standard Error	F	Prob > F
FR	0.57748066	0.61	0.4373
LADP	0.43244589	0.36	0.5520
BADP	0.43424350	0.13	0.7164
MGT	11.76838025	8.65	0.0044
SPECIAL	0.21757064	3.74	0.0569
AVSIZE	0.01710767	3.05	0.0851
SALPCT	0.46057749	8.84	0.0040
FEDPCT	0.63909102	0.45	0.5030
COPCT	1.11440660	10.68	0.0017

Table 4-11 provides the information necessary to evaluate Hypothesis 9 by comparing the Bottom Line Per Student for each district for fiscal year 1997 and fiscal year 1998. As noted in Chapter II, the primary difference between conditions in fiscal year 1997 and fiscal year 1998 was the meal patterns used.

Table 4-11
Discrepancy between Bottom Line Per Student
Fiscal Year 1997 and Fiscal Year 1998

Variable	Number Of Cases	Mean Discrepancy	SD of Discrepancy	Standard Error	t	Prob > |t|
BLPSTU	79	8.77	16.37	1.84	4.76	0.0001

During fiscal year 1997, 28 South Carolina public school district food services programs participated in a food purchasing cooperative referred to as The South Carolina Food Service Alliance. Food services programs managed by food service management companies did not belong to The Alliance. Consequently, three groups of districts were considered in evaluating Hypothesis 10: Alliance members, non-Alliance members, and FSMC districts. Table 4-12 contains summary data for each of these groups based upon BLPSTU for fiscal year 1997. Table 4-13 contains the same information for fiscal year 1998. The inferential information for hypothesis evaluation is contained in Table 4-14.

Table 4-12
Summary Data for Fiscal Year 1997 of BLPSTU
for Alliance, non-Alliance, and FSMC Food Service Programs

District Type	Number of Cases	Mean	Standard Deviation	Standard Error
Alliance	53	9.3	22.3	3.1
Non-Alliance	28	11.7	23.7	4.5
FSMC	10	-5.0	19.3	6.1

Table 4-13
Summary Data for Fiscal Year 1998 of BLPSTU
for Alliance, non-Alliance, and FSMC Food Service Programs

District Type	Number of Cases	Mean	Standard Deviation	Standard Error
Alliance	52	17.3	23.4	3.3
Non-Alliance	21	27.0	23.7	5.2
FSMC	9	6.5	12.1	4.0

Table 4-14
Comparison by Group of Alliance, non-Alliance, and FSMC Food Service Programs on BLPSTU

District Type	FY '97		FY '98	
	t	Prob < |t|	T	Prob < |t|
Alliance vs non-Alliance	0.44	0.660	1.58	0.1200
Alliance vs FSMC	-2.09	0.056	-2.09	0.0500
Non-Alliance vs FSMC	-2.21	0.040	-3.11	0.0045

The following conclusions concerning the hypotheses were drawn based upon the preceding data using a probability level for significance of 0.05.

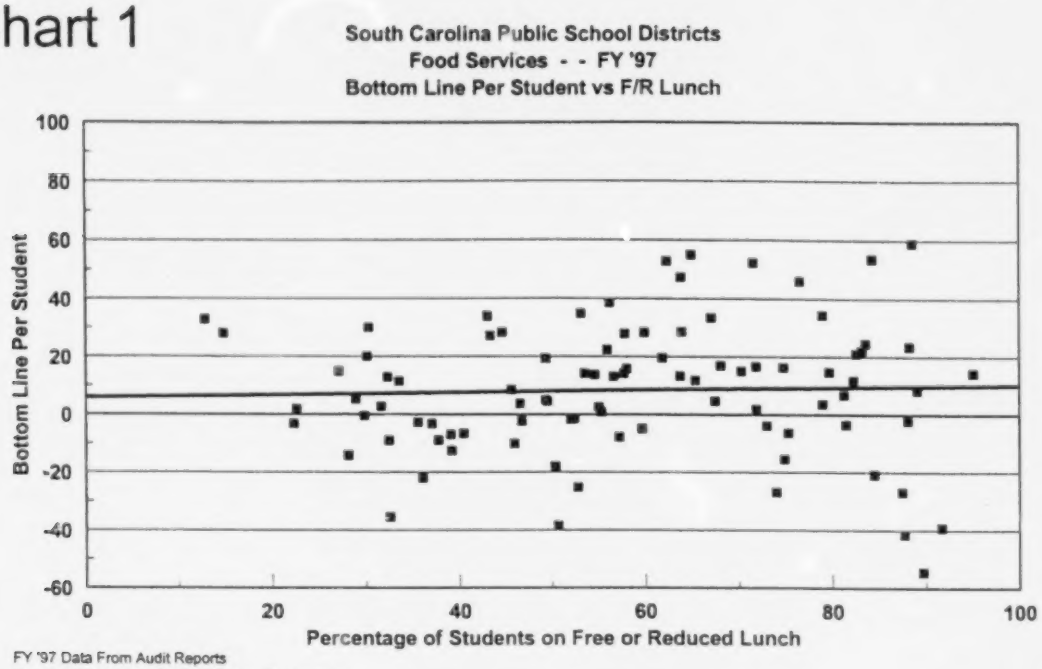
Table 4-15
Conclusions Concerning Hypotheses

Hypothesis	FY '97 Data	FY '98 Data	Combined Data
Hypothesis 1	Supported	Supported	[illegible]
Hypothesis 2	Not Supported	Supported	[illegible]
Hypothesis 3	Supported	Supported	[illegible]
Hypothesis 4	Supported	Supported	[illegible]
Hypothesis 5	Supported	Supported	[illegible]
Hypothesis 6	Not Supported	Not Supported	[illegible]
Hypothesis 7	Not Supported	Not Supported	[illegible]
Hypothesis 8	Supported	Supported	[illegible]
Hypothesis 9	[illegible]	[illegible]	Not Supported
Hypothesis 10	Supported	Supported	[illegible]
Hypothesis 11	Not Supported	Not Supported	[illegible]

Analysis of Data

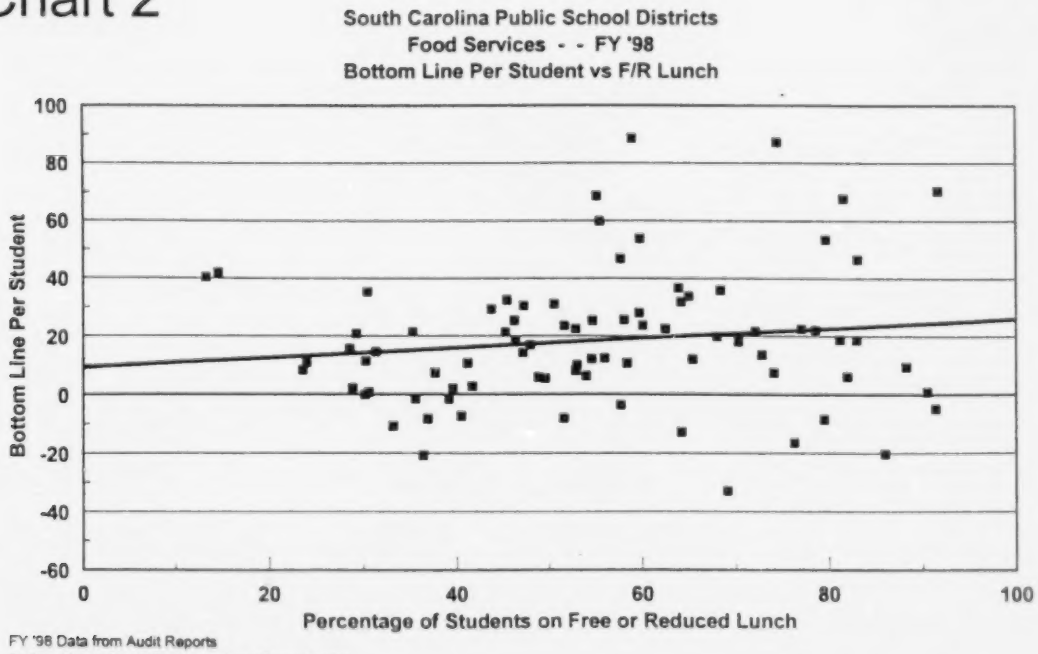
The finding that Hypothesis 1 was supported by both the fiscal year 1997 data (p=0.6127) and the fiscal year 1998 data (p=0.4373) was unexpected and somewhat surprising. The lack of a strong relationship between Free and Reduced Lunch Percentage and fiscal efficiency as measured by the proxy Bottom Line Per Student is further illustrated by the scatterplots in Chart 1 and Chart 2. These charts plot the Bottom Line Per Student against the Free and Reduced Lunch Percentages for fiscal year 1997 and fiscal year 1998 respectively. Total revenue for each free lunch served (federal reimbursement plus commodity assistance) was $1.9825 for fiscal year 1997. Districts with over 60 percent of their students who qualified for free and reduced price lunch received an additional $0.195 Severe Need Supplement for each meal served. Total revenue for each free lunch served increased to $2.04 for fiscal year 1998 with a Severe Need Supplement of $0.20. Total revenue per reduced lunch served was identical to free lunch because the difference in federal reimbursement was the same for free or reduced lunch when the part paid by the reduced lunch student was included. The total revenue for each full-pay lunch served varies with each districts lunch pricing, but, based upon a typical student paid lunch price, the reimbursement was $1.5725 for fiscal year 1997 and $1.58 for fiscal year 1998. One would expect that because total revenue for each free/reduced price lunch exceeded the total revenue for each full paid lunch by over $0.40 that the Bottom Line Per Student would have been elevated for

Chart 1



FY '97 Data From Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Chart 2



FY '98 Data from Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

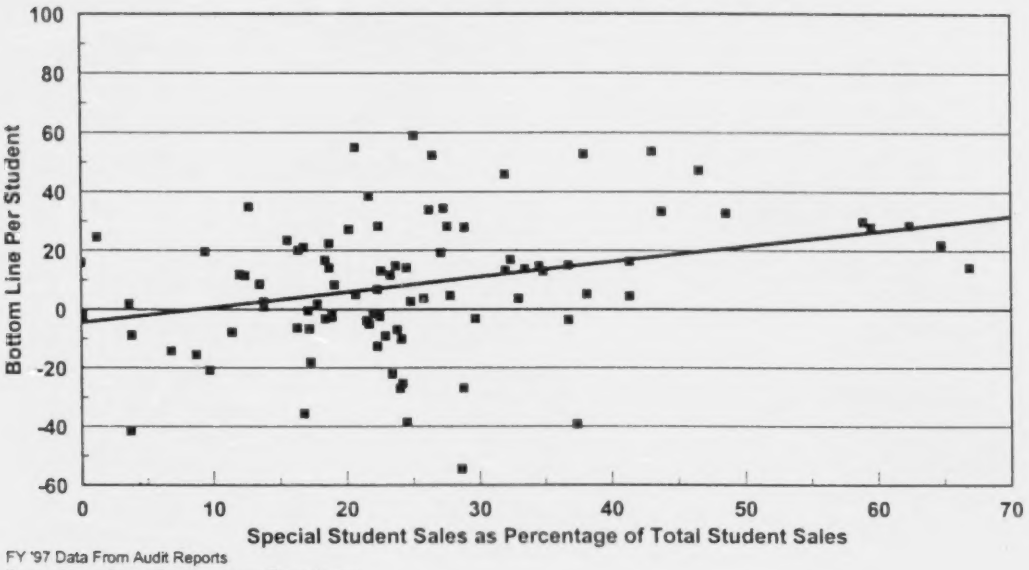
districts with high free/reduced lunch percentages. This increase did not occur because the increased revenue was diverted into capital outlay. Table 4-1 and Table 4-2, show the correlation between FR (Free and Reduced Lunch Percentage) and COPCT (Percentage of Revenue Devoted to Capital Outlay) is significant at the 0.02 probability level for fiscal year 1997 and significant at the 0.05 probability level for fiscal year 1998.

Hypothesis 2 which considers the impact of special sales to students as a percentage of total sales to students upon Bottom Line Per Student was not supported by fiscal year 1997 data but was supported by fiscal year 1998 data at the 0.05 probability level. Worth noting is the fact that the actual probability level was p=0.0161 for fiscal year 1997 and p=0.0569 for fiscal year 1998. Fiscal year 1997 was highly significant and fiscal year 1998 barely missed significance at the 0.05 probability level. The correlation between Special Sales and Bottom Line Per Student is shown to be highly significant (r=0.3031 and p=0.0056) in Table 4-4. Colinearity with other variables in the model was sufficient to parcel out some of the variability that otherwise would have been attributable to Special Sales. In fact, simply leaving BADP (Breakfast Average Daily Participation, p=0.7164) out of the model would have made Special Sales significant at the 0.05 probability level. Chart 3 and Chart 4 clearly show the impact of Special Sales upon Bottom Line Per Student.

Hypothesis 3, Hypothesis 4, and Hypothesis 5 were supported by both year's data. Hypotheses 3 and 4 addressed the impact of Lunch Average Daily

Chart 3

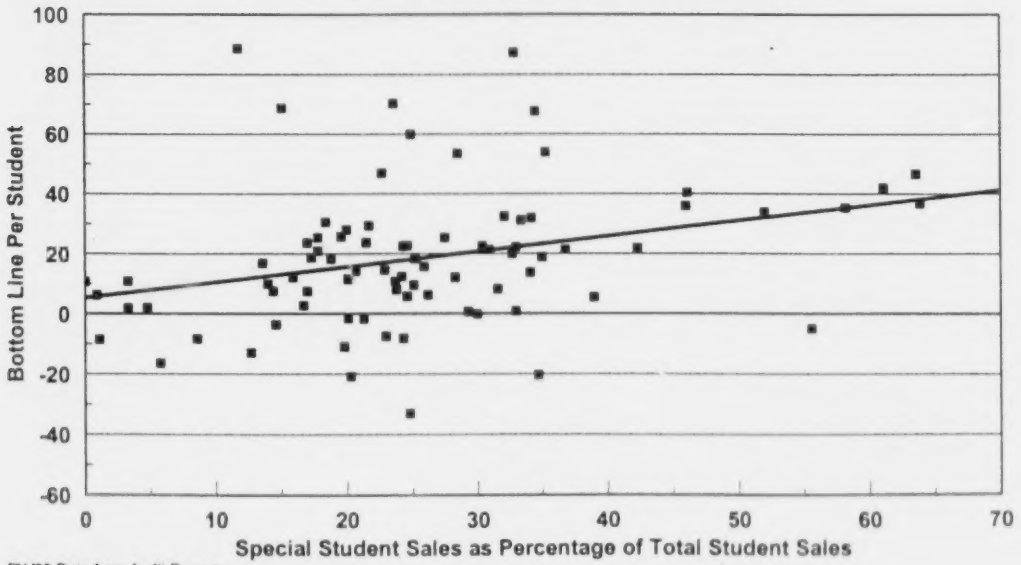
South Carolina Public School Districts
Food Services - - FY '97
Bottom Line per Student vs Special Sales Percentage



FY '97 Data From Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Chart 4

South Carolina Public School Districts
Food Services - - FY '98
Bottom Line per Student vs Special Sales Percentage



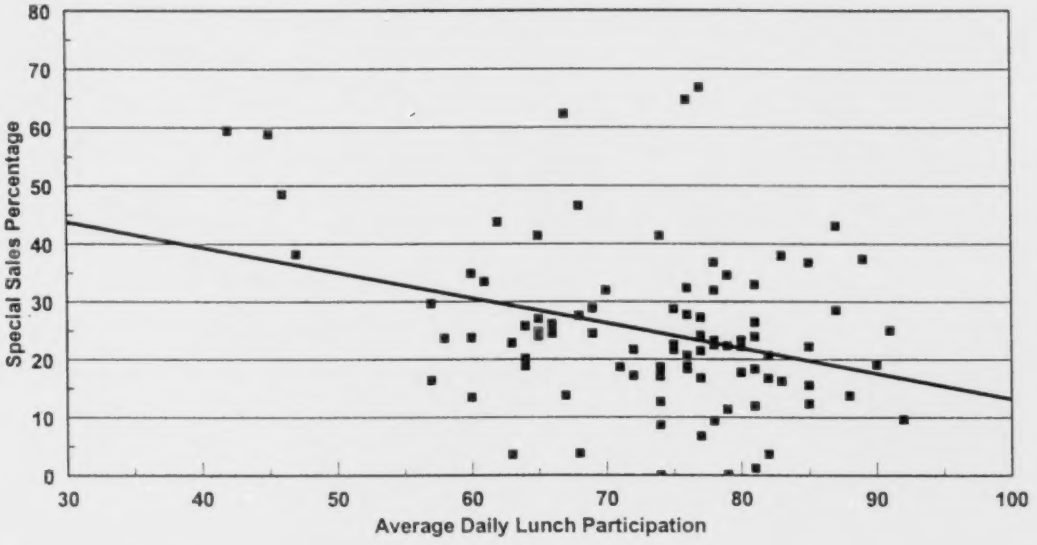
FY '98 Data from Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Participation and Breakfast Average Daily Participation respectively upon Bottom Line Per Student. The fact that neither of these variables even approached significance in the model for either fiscal year 1997 or fiscal year 1998 does not diminish the importance of these variables. Lunch Average Daily Participation had a strong negative correlation with Special Sales Percentage (r=-0.32532, p= 0.0001 for fiscal year 1997 and r=-0.27092, r=0.0001 for fiscal year 1998). This relationship is shown in Charts 5 and 6. Both were highly correlated to Free and Reduced Lunch Percentage (p=0.0001) for both variables for both fiscal year 1997 and fiscal year 1998. This result implies that they are also highly colinear with Capital Outlay Percentage. Their colinearity within Capital Outlay Percentage in turn substantially reduced Bottom Line Per Student such that no significant relationship could be found between either of these variables and Bottom Line Per Student. Hypothesis 5, Average Size of Schools, approached but never achieved significance at the 0.05 level (p=0.0799 for FY '97 and p=0.0851 for fiscal year 1998). Average Size of Schools was highly negatively correlated with Percentage of Revenue from Federal Sources, Lunch Average Daily Participation, and Breakfast Average Daily Participation.

Hypothesis 6 was not supported by either fiscal year 1997 or fiscal year 1998 data (p=0.0063 and p=0.0040 respectively). Charts 7 and 8 show the distribution of districts by Percentage of Revenue Devoted to Salary and Bottom Line Per Student. Red circles indicate food service management company managed food service programs and blue circles indicate district managed

Chart 5

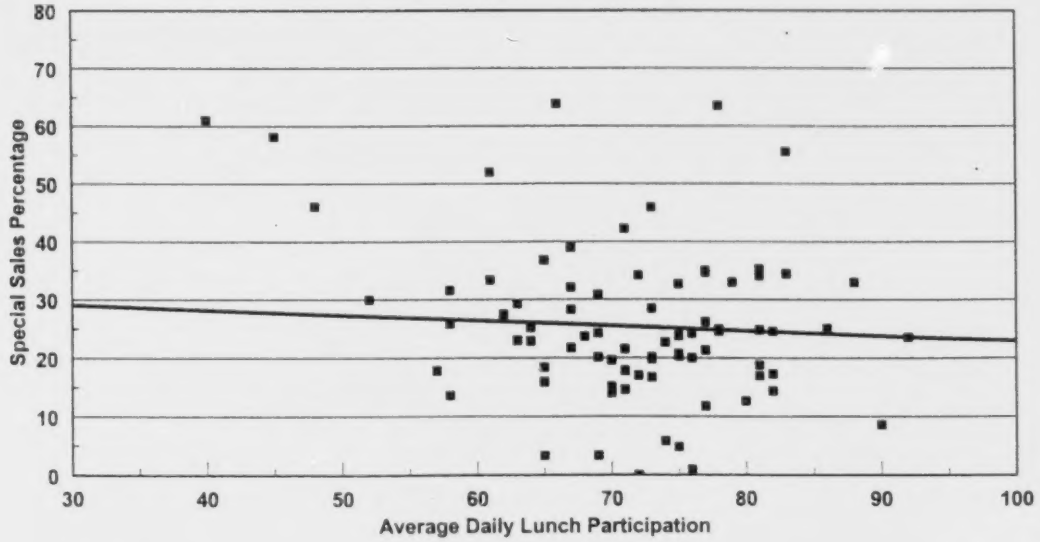
South Carolina Public School Districts
Food Services - - FY'97
Lunch Participation vs Special Sales



FY'97 Data From Audit Reports
Includes all 91 Districts

Chart 6

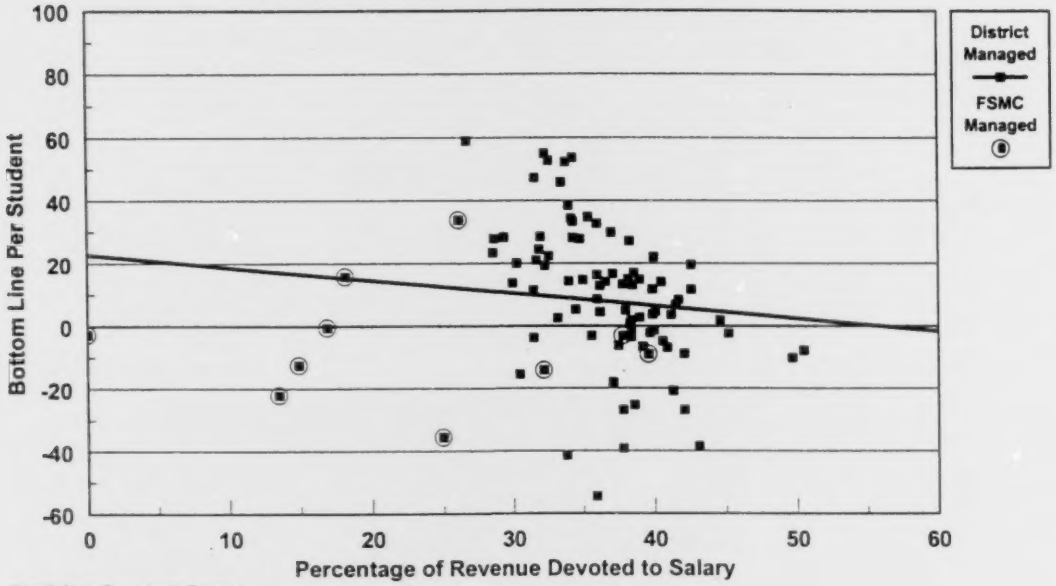
South Carolina Public School Districts
Food Services - - FY'98
Lunch Participation vs Special Sales



FY '98 Data from Audit Reports
82 of 86 Districts Reporting

Chart 7

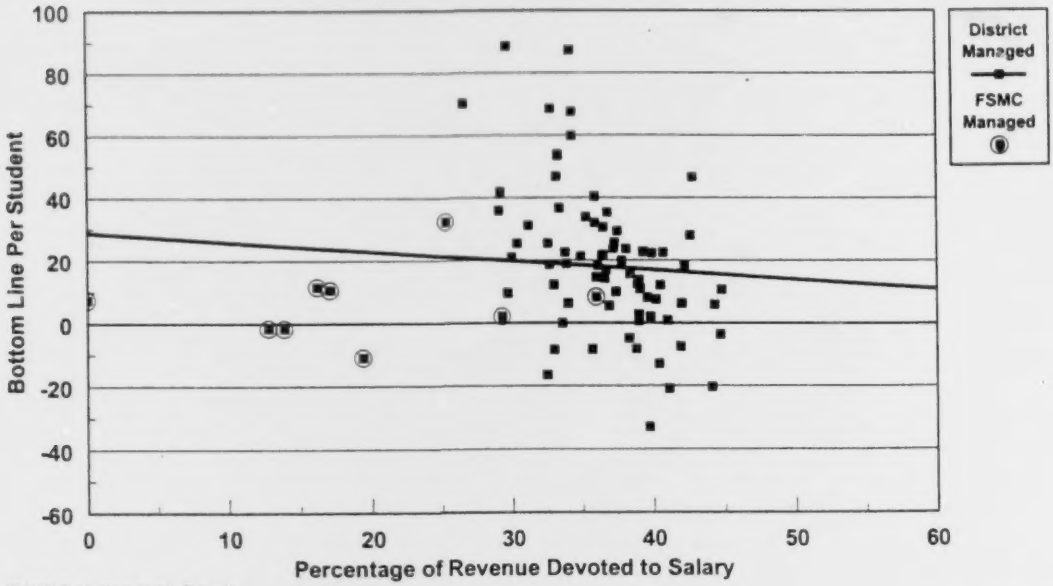
SC Public School Districts Food Service
FSMC vs District Managed - - FY '97
Bottom Line per Student by Percent of Revenue for Salary



FY '97 Data From Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Chart 8

SC Public School Districts Food Service
FSMC vs District Managed - - FY '98
Bottom Line per Student by Percent of Revenue for Salary



FY '98 Data from Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

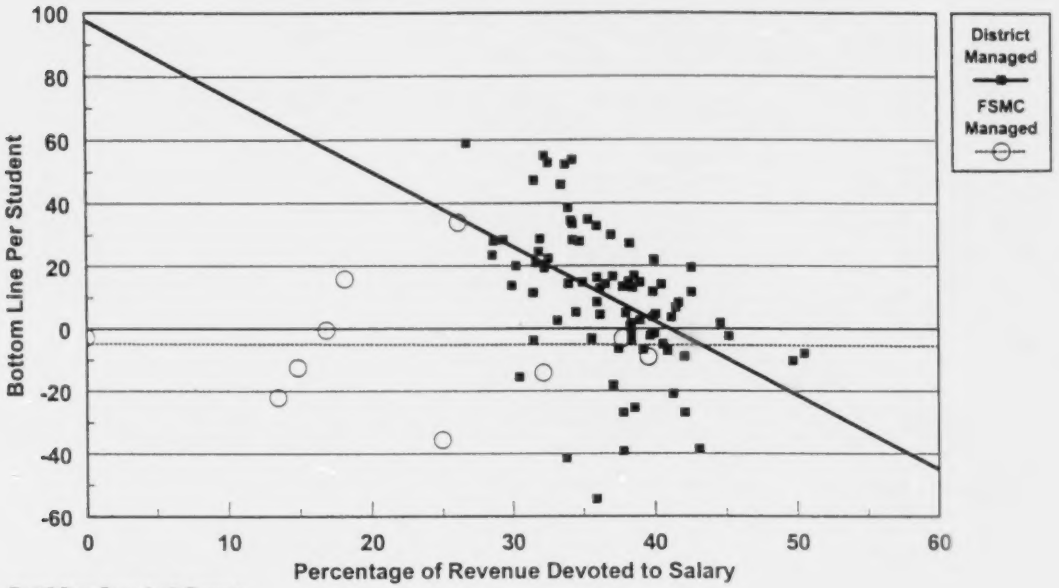
programs. Note that only one FSMC program fell above the blue regression or prediction line for all districts each year. There was one additional FSMC district on this line for fiscal year 1997. The contrast became even more striking when separate regression lines were provided for district managed (blue) and FSMC managed (red) programs in Charts 9 and 10. Worth noting are the vastly different slopes of the prediction lines. Percentage of Revenue Devoted to Salary made little or no difference to FSMC managed programs but made a dramatic difference to district managed programs.

Hypothesis 7, which addressed the impact of the Percentage of Revenues Devoted to Capital Outlay (COPCT), was not supported by either fiscal year 1997 or fiscal year 1998 data. The percentage of revenues devoted to capital outlay was so tightly correlated with Percentage of Free and Reduced Lunch that the reduction in Bottom Line Per Student resulting from capital outlay expenditures eliminated Percentage of Free and Reduced Lunch as a significant predictor for Bottom Line Per Student.

Hypothesis 8, which considered the impact of the Percentage of Revenue from Federal Sources, was supported by both years' data. However, Hypothesis 8 was also tightly correlated to Percentage of Free and Reduced Lunch and to Percentage of Revenue Devoted to Capital Outlay. Therefore, Hypothesis 8 failed as a significant predictor of Bottom Line Per Student exactly in the same manner as Percentage of Free and Reduced Lunch.

Chart 9

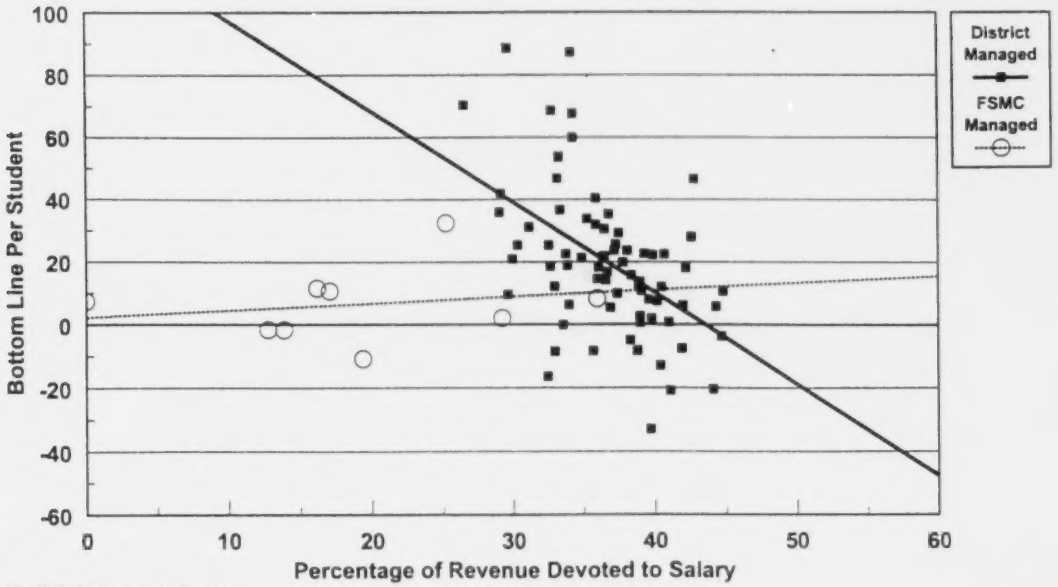
SC Public School Districts Food Service
FSMC vs District Managed - - FY '97
Bottom Line per Student by Percent of Revenue for Salary



FY '97 Data From Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Chart 10

SC Public School Districts Food Service
FSMC vs District Managed - - FY '98
Bottom Line per Student by Percent of Revenue for Salary



FY '98 Data from Audit Reports
Bottom Line refers to Revenues Less Expenditures
With Fringe and Transfers Excluded

Menu Patterns were significantly different in fiscal year 1997 from fiscal year 1998. The availability of a state approved traditional meal pattern in fiscal year 1998 resulted in a substantially elevated Bottom Line Per Student. Hypothesis 9 was not supported by the data in Table 4-11 (p=0.0001). Patterns changed very little from one year to the next. However, Bottom Line Per Student improved dramatically, by approximately $8.77 per student.

Hypothesis 10 was supported. Those non-FSMC districts belonging to the Alliance, a purchasing cooperative for district food service programs, showed no significant difference in Bottom Line Per Student from non-FSMC districts not belonging to the Alliance. However the data may not have reflected actual cost reductions made possible by the Alliance. Most Alliance member districts tended to be small and relatively poor districts where food service programs were under great pressure to carry their own weight. By contrast non-Alliance non-FSMC districts tended to be larger and more affluent districts with individual purchasing power rivaling that of the Alliance.

Hypothesis 11 was not supported by either fiscal year 1997 or fiscal year 1998 data. During both years, district managed food service programs tended to have a significantly greater Bottom Line Per Student than did FSMC managed food service programs. Despite the lower bottom line, FSMC's also paid out much less in salary than did district managed programs. This is shown in both Table 4-3 (r=-0.6197, p=0.0001) and Table 4-4 (r=-0.7413, p=0.0001). When considered independently of district managed programs, Bottom Line Per

Student does not seem to be impacted for FSMC's by the Percentage of Revenue Devoted to Salary. Worth noting are the different slopes of the regression lines in Charts 9 and 10. While not significant at the 0.05 level, the correlation between MGT (FSMC=1, District=0) and Percentage of Revenues Devoted to Capital Outlay was negative both years. This means that FSMC's tended to invest less in capital outlay than did district managed programs. Also interesting is the fact that Table 4-6 and Table 4-8, which consider only FSMC's, both showed no significant correlations between Bottom Line Per Student, the measure of fiscal efficiency used in this study, and any of the other variables of this study. By contrast, district managed food service operations showed strong correlations between Bottom Line Per Student and Special Sales to Students, percent of Revenue Devoted to Salary, and Percentage of Revenue Devoted to Capital Outlay.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

In order to participate in the National School Lunch and School Breakfast Programs, public school food service programs must be operated as nonprofit enterprises. School districts can claim indirect cost at a predetermined rate approved by the federal government and state governments. Excess funds generated through food service programs that are not claimed through indirect cost may be spent on needs within the food service program, or the funds can be used to reduce the per meal cost charged to students. Food service programs may not accumulate a fund balance that exceeds three months of operating costs.

This study found that most districts with higher than average numbers of students qualifying for free and reduced price lunch tend to spend more money on capital outlay than do districts with less than average numbers of students qualifying for free and reduced price lunch. Also highly correlated to the percentage of students who qualified for free and reduced price lunches was the percent of students who ate lunch and breakfast each day at school.

These findings were not surprising and confirmed what many school food service experts have recognized. The larger the percentage is of students who qualify for free and reduced price lunch and breakfast, the greater the potential is to increase revenue within the food service program because federal reimbursement rates increase. The total revenue received from full pay lunches varies with the price districts charge for full pay lunches, but the study found that the typical reimbursement rate, including the amount paid by the student, for full pay students was $1.5725 for fiscal year 1997 and $1.58 for fiscal year 1998. At the same time, the federal reimbursement rate for free and reduced meals was over 40 cents more per meal when compared to full pay lunches (See page 53 of study). However, the additional revenue produced must be offset through additional expenditures or through cheaper lunch prices for students, since school districts may not make a profit from the food service program.

The school districts that serve a student population with very few students who qualify for free and reduced price lunches recieve federal reimbursements that are not as great as for programs that serve larger percentages of students who qualify for free and reduced price lunches. To compensate, these districts must charge higher prices for full pay meals or look to alternative sources to makeup the differences.

One way to compensate for the difference in federal revenue is through increased special sales. The study found that the amount of revenue generated through special sales significantly changed districts' Bottom Line per Student.

Special sales may be composed of individual items sold in a school cafeteria that are not included as a part of the reimbursable meal or of additional servings of individual food items (Ala carte) that were offered to make a reimbursable meal. Special sales in school cafeterias are capable of generating significant amounts of additional revenue because their sale price usually is not controlled. In most school districts, reimbursable school lunch and breakfast prices are kept low to encourage children to participate in the program, but special sale items are priced higher, since they only supplement the regular meal program.

Also important to special sales is how school districts elect to operate school canteens. The South Carolina State Department of Education, Office of School Food Services policy regarding school canteens follows federal guidelines suggesting that canteens be closed during schools' meal serving hours and not located in the area where meals are served. The Office of School Food Services also suggest that if canteens are operated, that they be operated by the school food service program (See Competitive Food Policy in Appendix).

Many school districts follow the recommendation of the Office of School Food Services and operate their canteens through the school food service program. This practice eliminates competition to the food service program from canteens and increases revenues for the program. These revenues are significant, particularly in high schools and middle schools. Profits from school canteens in large high schools often are as much as $100,000 or more in a single school year.

Many South Carolina school districts have a long-standing practice of keeping canteens separated from the school food service program and allowing them to be open in the high schools and middle schools when meals are being served. This direct competition to the food service program does have an impact on the efficiency of the operation as was shown by the study.

The study found that average daily participation in lunch and breakfast programs was highly correlated to the percent of students who qualified for free and reduced meals in school districts. The study also found that average daily participation was not significantly correlated to the Bottom Line per Student and negatively correlated to Percent of Special Sales. However, the percent of students who qualified for free and reduced price meals was highly correlated to the amount of money spent on capital outlay. These relationships point to strong colinearity (See Charts 5 and 6). One can conclude from the colinearity that both high participation and special sales are important in improving Bottom Line per Student, and that these facts behoove school districts to concentrate on both factors to achieve the most efficient relationship possible.

Many factors determine the size of schools in school districts, but efficiency of school food service operations is probably not a factor that is often considered. This study examined school size and found that it was not a significant factor. School size, however, was high negatively correlated to the percent of federal revenue received and average daily participation. This means that larger schools probably tend to have fewer students who qualify for free and

reduced price lunches and fewer students who eat school prepared meals. More study may be necessary to give an exact answer as to the reasons for these results, but one could easily conclude that the answer is probably related to demographics. Schools located in the more affluent suburban areas of South Carolina tend be relatively large schools while inter-city schools and rural schools in South Carolina tend to be smaller schools.

As one would expect, the percent of revenue devoted to pay salaries was highly related to the Bottom Line per Student for self-operated programs. Therefore, salaries paid to foodservice workers and labor hours per meal must be monitored very closely in order for a program to improve efficiency.

For food service management company operated programs, the results were different. The study produced no significant relationship between Bottom Line per Student and percent of revenue devoted to salary. When scatterplot charts were examined, only one food service management company operated program fell above the regression line. In fact, most food service management company operated programs not only fell below the regression line, they also devoted much less revenue to salary than did the self-operated programs, the reverse of what would be expected. One would assume that with less money devoted to salary the management company operated programs generally would appear above the regression line. Yet only one program achieved that position and one other management operated program appeared on the regression line. The most likely explanation for this is that revenue not going to salaries for

management company operated programs was taken up in the management fees charged by the companies, which would tend to flatten the Bottom Line per Student for management company operated programs.

Percent of revenue devoted to capital outlay was highly correlated to Bottom Line per Student in this study. Therefore, one could conclude that districts that spend significant amounts of money from their food service program on capital outlay generally operate very efficient programs. However, care must be taken not to make such generalizations. Some districts that spent very little money on capital outlay may have made a conscious decision to instead reduce revenue by charging students less for meals and not spending money for capital outlay, making do with older equipment. Regardless, what we do know is that food service programs that serve student populations with a high percentage of students who qualify for free and reduced price lunches collect more federal revenue, have higher average daily participation, and therefore more money.

From a review of the literature it was determined that South Carolina had not approved the Traditional Meal pattern for fiscal year 1996-97. Food service programs had to choose among the Enhanced Food Based pattern, NuMenus pattern, or the Assisted NuMenus pattern. Two of these patterns, the NuMenus pattern and the Assisted NuMenus pattern required food managers to complete a nutritional analysis of each meal prepared to ensure that the meals would meet the federal government's minimum nutritional requirements. While these meal patterns opened the way for food managers to serve smaller meal portions to

students and still meet the nutritional guidelines, the analyses that were required to determine the nutritional value of each meal were complicated and could not be done easily. Sophisticated equipment and/or computer software was needed to complete the analyses. The only other meal pattern available was the Enhanced Food Based pattern that required significantly more bread to be served and was, therefore, more expensive (See Appendix for menu guides).

South Carolina changed this requirement for fiscal year 1997-98 and once again included the Traditional Meal pattern as an approved option. Therefore, school food service programs were able to choose a pattern that did not require as much bread as the Enhanced Food Base pattern without having to choose one of the NuMenus.

This study examined the two years based on menu patterns and found the difference to be significant. Bottom Line per Student improved by $8.77 per student in 1997-98 as compared to 1996-97.

The last part of the study was devoted to a comparison of food management company operated programs with self-operated programs to determine if there was a difference in Bottom Line per Student. The data showed that as a whole self-managed programs were much more likely to have a better Bottom Line per Student than food management company operated programs even though food management company operated programs generally paid out less in salary. In addition, food management company operated programs were

likely to spend less money on capital outlay and to have a lower percentage of student participation.

These findings were not inconsistent with findings from the literature review. The GAO study, which was a national survey that was completed in 1996, found that generally, food management company operated programs were likely to have lower participation than self-operated programs. However, the GAO study also noted that when food management companies took over poorly performing programs the management companies usually improved performance of the program and participation. Student participation was found on average to be about 49 percent for management company operated programs as compared to about 65 percent for self-operated programs (GAO, 1996,pp.3-5).

Recommendations

Based on this study the following recommendations are being made to improve the fiscal efficiency of the program:

1. Food service programs should offer special sales items to students in the high school and middle school programs. This study found that special sales are highly correlated to Bottom Line per Student. The special sales program should continue to be expanded as appropriate to complement the regular meal program.

2. The amount of money spent on salaries is very important and must be monitored carefully. The study showed that programs managed by food service management companies tended to spend less money on salaries than did self-managed programs. District managed food service programs must maintain a competitive salary schedule, but must take care to insure that meals per labor hour are at or above the state's average. While no data are available for average meals per labor hour for public schools in South Carolina, such data are available from the study of the literature (Pannell, 1994). Based on limited available data for the first half of school year 1998-99, some schools are achieving the meals per labor hour recommended by Pannell, but most are not. Districts should determine means per labor hour for each school and take appropriate steps to improve meals per labor hour at the low achieving schools.
3. While average daily participation was not highly correlated to Bottom Line per Student, the district food service programs should continue to work to improve participation. Most districts have noted significant progress in the last several years but more improvement is still needed. Districts should carefully study exemplary programs known for high participation rates and implement their best practices.
4. Food service programs in districts with a low percentage of students who qualify for free and reduced price meals are at a definite disadvantage because federal reimbursements are less than for school districts with high

percentages of students who qualify for free and reduced meals. This difference in federal reimbursements may necessitate pricing full pay meals at a price somewhat above the state average for full pay meals. Care must be taken to balance the need for revenue against the price of full pay meals.

5. This study confirmed that when school districts allow school canteens to be operated by the food service program those revenues directly benefit the operation and are reflected in the Bottom Line per Student. Those districts with a long history of allowing school principals to operate school canteens in competition with the food service program must recognize that the operation of these canteens does decrease the efficiency of the food service program even though profits from these canteen operations are spent directly on programs for the students as is required by the federal lunch program.
6. Studies have shown that food service management companies generally are able to improve programs that are operating very poorly, but tend to perform overall no better than self-operated programs. Every school district operated food service program has potential for improvement, but most do not have problems to the extent that would warrant intervention by a food service management company. Districts considering changing to a food service management company managed program should carefully consider current employee relations, the extent to which the existing program meets student and community quality expectations and the potential for growth toward meeting the financial goals of the program. If the food service program is not

broken, do not attempt to fix it. If it is broken and can be adequately repaired, do so. If it is broken and cannnot be repaired, replace it with a food service management company. However, changing from a district managed food service program to a food service management operated program should always be a last resort.

APPENDIX

School Lunch, Breakfast and Food Distribution Agreements

The School Lunch, Breakfast and Food Distribution Agreements are legal contracts between the South Carolina State Department of Education and each school district participating in the programs. Its provisions are identical to the provisions of the contract between the South Carolina State Department of Education and the United States Department of Agriculture. (See pages 2.6, 2.8 and 2.10)

Under the terms of the agreements, each school district agrees to:

- ✣ serve a lunch and/or breakfast that meets meal requirements;
- ✣ maintain proper sanitation and health standards in conformance with all applicable state and local laws;
- ✣ comply with record keeping requirements;
- ✣ provide free and reduced-price meals to eligible children;
- ✣ provide meals to all children without regard to race, color, gender, religion, disability, age or national origin;
- ✣ comply with financial requirements and provisions;
- ✣ accept and use commodities; and
- ✣ operate the program on a nonprofit basis.

The district must keep a copy of each agreement on file. To extend the agreements each school district must complete a renewal or new agreements at the beginning of each school year.

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SOUTH CAROLINA STATE DEPARTMENT OF EDUCATION
NATIONAL SCHOOL LUNCH PROGRAM AGREEMENT

To effectuate the purpose of the National School Lunch Act (42 U.S.C.-1751-1960), and the Regulations for the National School Lunch Program issued under, the South Carolina Department of Education, hereinafter referred to as the "Department," and District _____ of _____ County, whose address is _____ City of _____, State of South Carolina, hereinafter referred to as the "District," covenant and agree as follows:

EPARTMENT AGREES THAT:

extent of funds available, the Department shall reimburse the District in connection with the cost of providing lunches in the schools listed on the attached tion in the fiscal year during which this Agreement is in effect.

ISTRICT AGREES THAT:

upervise School Lunch operations in the schools listed in the Application and will require each school to:

Keep, or cause to be kept, up-to-date, accurate and full records of all operations under the School Lunch Program as prescribed by the Department, and the copies of all records will be kept by the school and will be available for inspection by properly authorized persons at any reasonable hour of the day. Records will be maintained for a period of three years after the end of the fiscal year to which they pertain or until resolution if audit findings are not resolved.

Supply lunches free or at reduced price to children who are determined by the local school authorities to be unable to pay the full price. That no physical segregation or other discrimination against any child will be made by the school because of this inability to pay the full price of the lunch.

Comply fully with the policy for free and reduced price meals as approved by the Department.

Operate a non-profit lunch program for the benefit of children, and ensure that all funds accruing from the operation of the program will be used in the school food service program. Operating balance will be limited to a level consistent with program needs; and upon request by the Department the District will explain the need for a higher level.

Accept and use in quantities as can be effectively utilized the commodities donated by U.S.D.A., and that such commodities will be used exclusively for the School Lunch Program, and further that such commodities will not be sold, exchanged, or hoarded.

Price the school lunch as a unit.

Maintain adequate facilities for storing, preparing, and serving food, and to ensure proper sanitation and health standards conforming to laws and regulations by the South Carolina State Department of Health and Environmental Control.

Serve lunches which meet the requirements for a school lunch as prescribed by the U.S.D.A. during a period designated as the lunch period by the school. The proceeds from the sale of extra food items will accrue to the School Food Service account.

Plan and implement a program of student and parent involvement in the School Lunch Program. All activities will be fully documented.

Comply with the rules and regulations promulgated by the United States Department of Agriculture governing the sale of competitive foods.

Assure that income shall be used only for authorized purposes.

Claim reimbursement at the assigned rates only for reimbursable free, reduced price and paid lunches served to eligible children and establish a system for obtaining on a daily basis an accurate count of lunches served by category, e.g., Free-Reduced-Paid at the point of service.

Require lunches for teachers and all adults other than local cafeteria employees be paid for by the individual or from sources other than School Food Service Program funds. The minimum charge for each adult lunch will be that established by the Department.

Comply with Section 210.19a Procurement Standards in establishing procedures for the procurement of supplies, including food, equipment, and other services with program funds.

Require school food service employees to attend professional improvement meetings called by the County and District school food service supervisors.

Complete claims review process and submit reports and claims for reimbursement in accordance with procedures established by the Department. Agree that the school district official signing the claim is responsible for reviewing and analyzing meal counts to ensure accuracy.

Acknowledge that failure to submit accurate claims will result in the recovery of an overclaim and may result in the withholding of payments, suspension or termination of the program and that if failure to submit accurate claims reflects embezzlement, willful misapplication of funds, theft, or fraudulent activity, the penalties specified in Part 210.5 of the regulations shall apply.

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18. Adhere to the Assurances stated below:
"The District hereby agrees that it will comply with Title VI of the Civil Rights Acts of 1964 (42 U.S.C. 2000d et seq.), Title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.); all provisions required by the implementing regulations of the Department of Agriculture; Department of Justice Enforcement Guidelines, 28 CFR 50.3 and 42; and FNS directive sand guidelines, to the effect that, no person shall, on the grounds of race, color, national origin, sex, age or handicap be excluded from participation in, be denied benefits of, or otherwise be subject to discrimination under any program or activity for which the program applicant receives federal financial assistance from FNS; and hereby gives assurance that it will immediately take measures necessary to effectuate this agreement.
By accepting this assurance, the program applicant agrees to compile data, maintain records and submit reports, as required, to permit effective enforcement of the nondiscrimination laws and permit authorized USDA personnel during normal working hours to review such records, books and accounts as needed to ascertain compliance with the nondiscrimination laws. If there are any violations of this assurance, the Department of Agriculture, Food and Consumer Service, shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the program applicant and its successors, transferees and assignees, as long as they receive assistance or retain possession of any assistance from the Department. The person or persons whose signatures appear below are authorized to sign this assurance on behalf of the program applicant."

THE DEPARTMENT AND THE DISTRICT MUTUALLY AGREE THAT:

1. The Application listing of schools (feeding sites) approved by the Department, shall be part of this Agreement.

2. Schools may be added or deleted from the Application as need arises, and the references herein to the Agreement shall be deemed to include such schedule as supplemented and amended.

3. The Department shall promptly notify the District of any changes in the minimum lunch requirement or the assigned rate of reimbursement.

4. This Agreement may be terminated upon ten (10) days written notice on the part of either party hereto, and the Department may terminate this Agreement immediately after receipt of evidence that the terms and conditions of the Agreement have not been fully complied with by the District.

_____
(District Superintendent)

_____
(Date)

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APPROVED:

_____
(Director, Office of School Food Services)

_____
(Date)

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SOUTH CAROLINA STATE DEPARTMENT OF EDUCATION
SCHOOL BREAKFAST PROGRAM AGREEMENT

In order to effectuate the purpose of the Child Nutrition Act of 1966 and the Regulations governing the School Breakfast Program issued thereunder, the South Carolina Department of Education, hereinafter referred to as the "Department," and District _____ of _____ County, whose address is _____ City of _____, State of South Carolina, hereinafter referred to as the "District," covenant and agree as follows:

THE DEPARTMENT AGREES THAT:

To the extent of funds available, the Department shall reimburse the District in connection with the cost of providing meals for the school breakfast programs in the schools listed on the attached Application in the fiscal year during which this Agreement is in effect.

THE DISTRICT AGREES THAT:

It will supervise School Breakfast operations in the schools listed in the Application and will require each school to:

1. Operate a non-profit breakfast program for the benefit of children, and ensure that all funds accruing from the operation of the program will be used in the school food service program. Operating balance will be limited to a level consistent with program needs; and upon request by the Department the District will explain the need for a higher level.
2. Serve breakfasts which meet the requirements for a school breakfast as prescribed by the U.S.D.A. during a period designated as the breakfast period by the school.
3. Price the school breakfast as a unit.
4. Supply breakfasts free or at reduced price to children who are determined by the local school authorities to be unable to pay the full price. That no physical segregation or other discrimination against any child will be made by the school because of this inability to pay the full price of the breakfast.
5. Comply fully with the policy for free and reduced price meals as approved by the Department.
6. Claim reimbursement at the assigned rates only for those reimbursable school breakfasts served to eligible children and to establish a system for obtaining on a daily basis an accurate count of breakfasts served by category, e.g., Free-Reduced-Paid at the point of service.
7. Submit reports and claims for reimbursement in accordance with procedures established by the Department.
8. Maintain adequate facilities for storing, preparing, and serving food, and to ensure proper sanitation and health standards conforming with laws and regulations by the South Carolina State Department of Health and Environmental Control.
9. Assure that income shall be used only for authorized purposes.
10. Comply with Section 210.19a Procurement Standards in establishing procedures for the procurement of supplies, including food, equipment, and other services with program funds.
11. Maintain full and accurate records of the breakfast program and retain such records for a period of three years after end of the fiscal year to which they pertain, or until resolution if audit findings have not been resolved.
12. Comply with the rules and regulations promulgated by the U.S.D.A. governing the sale of competitive foods.
13. Make all accounts and records pertaining to the breakfast program available to the Department and U.S.D.A. for audit or administrative review at a reasonable time and place.
14. Require breakfasts for teachers and all adults other than local cafeteria employees be paid for by the individual or from sources other than School Food Service Program funds. The minimum charge for each adult breakfast will be that established by the Department.
15. "The program applicant hereby agrees that it will comply with Title VI of the Civil Rights Acts of 1964 (42 U.S.C. 2000d et seq.), Title IX of the Education Amendments of 1972 (20 U.S.C. 1681 et seq.), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.); all provisions required by the implementing regulations of the Department of Agriculture; Department of Justice Enforcement Guidelines, 28 CFR 50.3 and 42; and FNS directive sand guidelines, to the effect that, no person shall, on the grounds of race, color, national origin, sex, age or handicap be excluded from participation in, be denied benefits of, or otherwise be subject to discrimination under any program or activity for which the program applicant receives federal financial assistance from FNS; and hereby gives assurance that it will immediately take measures necessary to effectuate this agreement.

    By accepting this assurance, the program applicant agrees to compile data, maintain recrods and submit reports, as required, to permit effective enforcement of the nondiscrimination laws and permit authorized USDA personnel druing normal working hours to review such records, books and accounts as needed to ascertain compliance with the nondiscrimination laws. If there are any violations of this assurance, the Department of Agriculture, Food and Consumer Service, shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the program applicant and its successors, transferees and assignees, as long as they receive assistance or retain possession of any assistance from the Department. The person or persons whose signatures appear below are authorized to sign this assurance on behalf of the program applicant."

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THE DEPARTMENT AND THE DISTRICT MUTUALLY AGREE THAT:

The Application listing of schools (feeding sites) approved by the Department, shall be part of this Agreement.

Schools may be added or deleted from the Application as need arises, and the references herein to the Agreement shall be deemed to include such schedule as supplemented and amended.

The Department shall promptly notify the District of any changes in the minimum breakfast requirement or the assigned rate of reimbursement.

This Agreement may be terminated upon ten (10) days written notice on the part of either party hereto, and the Department may terminate this Agreement immediately after receipt of evidence that the terms and conditions of the Agreement have not been fully complied with by the District.

_____
(District Superintendent)

_____
(Date)

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APPROVED:

_____
(Director, Office of School Food Services)

_____
(Date)

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SOUTH CAROLINA STATE DEPARTMENT OF EDUCATION
FOOD DISTRIBUTION AGREEMENT

AGREEMENT BETWEEN DISTRIBUTING AGENCY AND RECIPIENT AGENCY FOR COMMODITIES DONATED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

pient Agency named below hereby makes application for commodities donated by the United States Department of Agriculture to the ing Agency named below:

ipient Agency hereby agrees to the following terms and conditions:

mmodities will be distributed only in quantities which can and will be equitably distributed, properly stored, and fully utilized by eligible pol(s) as listed on the Application for Participation.

mmodities received under this agreement will distributed only to eligible schools served by the Recipient Agency, and will not be otherwise posed of without prior written approval of the Distributing Agency. Under no circumstances will the United States Department of Agriculture mmodities be sold or traded. In case a school has a surplus of any commodity, the Recipient Agency may transfer such surplus to another pol under its supervision where the commodity can and will be utilized. Transfer documentation will be maintained by the Recipient Agency. ransfers between Recipient Agencies must be authorized, approved and documented by the Distributing Agency.

ilities for the handling, storage, and distribution of commodities shall be such as to properly safeguard against theft, spoilage, and other .

ipient Agencies will pay Commercial Distributors, under contract with the Distributing Agency, a fee to cover receiving, storage and delivery USDA donated foods.

urate records pertaining to the receipt and use of commodities will be kept for a period of three years and reports furnished to the stributing Agency as required. As a minimum, these records will consist of:
a record of all commodities received, issued, or transferred including date and quantity;
an accounting of funds received from the sale of containers; and,
an accounting of other funds collected in connection with the handling and distribution of commodities. Representatives of the Distributing Agency and the United States Department of Agriculture are authorized to inspect and audit such books and records at any reasonable time to insure compliance with the above conditions.

he Recipient Agency improperly distributes or uses any donated commodity, or causes loss of or damage to a donated commodity through ailure to provide proper storage, care, or handling, it shall pay to the Distributing Agency a sum equal to the value of the lost commodities. he Recipient Agency agrees to report to the Distributing Agency all donated food losses valued at $100.00 or more. At its option, the tributing Agency may permit the Recipient Agency to replace the commodity. Upon the happening of any event creating a claim in favor he Recipient Agency against a warehouseman, carrier or other person, for the loss of, or damage to, a donated commodity, the Recipient ency shall take action necessary to obtain restitution.

unds accruing from the sale of containers, salvage of donated foods, distribution charges, insurance, or recoveries from loss or damaged ims shall be used only for payment of expenses of the Commodity Distribution Program, including transportation, storage, and handling commodities, and other administrative expenses. If excess funds accumulate, such funds shall be used to reduce distribution charges, purchase additional foods or paid to the Distributing Agency.

ecipient Agencies shall investigate promptly complaints received in connection with the use of commodities and shall notify the Distributing ency immediately of any complaint received.

her agency may terminate this agreement by giving (30) days notice in writing with cause to the other party. The Distributing Agency may cancel this agreement immediately upon receipt of evidence that the terms and conditions thereof have not been fully complied with. Subject such notice of termination or cancellation of the agreement, the Recipient Agency agrees to comply with the instructions of the Distributing ency either (a) to distribute all remaining inventories of United States Department of Agriculture commodities in accordance with the ovisions of this agreement or (b) to return such inventories to the Distributing Agency, and to transmit such reports as are required by the tributing Agency to record final disposition of such inventories.

(Name of Recipient Agency) (Address of Recipient Agency)

(Signature of Authorized Representative) (Title) (Date)

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ved and certified for period of July 1, 1997 to June 30, 1998
roved by:

tion Associate, Food Distribution Section Date
State Department of Education, Office of Food Services

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❖Menu Requirements

School Meals Initiative for Healthy Children

The USDA **School Meals Initiative for Healthy Children** underscores our national health responsibility to provide healthy school meals that are consistent with age appropriate Recommended Dietary Allowances (RDA) and caloric goals, and the Dietary Guidelines for Americans found in Section 14.

Healthy School Meals

The concept of a healthy school meal encompasses more than just meeting the Dietary Guidelines for Americans. It also means considering the following additional goals whenever possible:

Goals:

1. Incorporate culinary principles of taste and presentation.
2. Focus on customers served, incorporating regional, cultural, ethnic and other preferences.
3. Provide safe meals for children.
4. Make meals accessible to all children.
5. Reinforce classroom nutrition education by providing a "learning laboratory" for healthy food choices.
6. Assist in increasing appreciation of food origins, cultural food history, variety of foods and relationship to environment and agriculture.
7. Support and teach the principles of the "social meal."
8. Provide education in the preparation and service of healthy, economical meals.
9. Serve in an encouraging environment with adequate time for meal service.
10. Link with a school nutrition policy promoting healthy food choices throughout the school.

Implementing a Menu Planning System

USDA has identified four alternative menu planning systems: Enhanced Food Based Menus, Traditional Food Based Menus, NuMenus (Nutrient Standard Menu Planning) and Assisted NuMenus (Assisted Nutrient Standard Menu Planning).

The choice of which system to use is up to each school district. School districts may choose more than one system to accommodate the needs of schools within the district. Menu planners are faced with tremendous challenges and opportunities for improving the health of American children. Serving healthier meals is a major step toward achieving that objective.

Meet Nutrition Goals

The objective of all four menu planning systems is to meet the following *USDA School Meals Initiative for Healthy Children's* nutrition goals:

- Recommended Dietary Allowances (RDA)
  - 1/4 RDA for Breakfast
  - 1/3 RDA for Lunch
- Calorie Goals–Age appropriate
- Dietary Guidelines for Americans–Balanced nutrient content

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The Nutrient Standards that are set for the four menu planning systems—Enhanced Food Based Menus, Traditional Food Based Menus, NuMenus and Assisted NuMenus—are based on the required level of calories, nutrients and dietary components; and by weighting and averaging the RDA for a specific age or grade group. Planned and offered breakfast and/or lunch menus averaged over a week should meet the Nutrient Standard of the age or grade group for which they are intended. Meeting these standards is the goal for all four menu planning systems.

Calories and Nutrients in the Nutrient Standards

Standards are set for:

- Calories
- 30 percent or less calories from fat
- Less than 10 percent calories from saturated fat
- Protein
- Calcium
- Iron
- Vitamin A
- Vitamin C

Other nutrients and dietary components that will be analyzed are carbohydrate, cholesterol, sodium and dietary fiber. While there are no quantity standards set for these dietary components, they must be included in the analysis except carbohydrate, which is optional. They will be surveyed over time to check on the implementation of the Dietary Guidelines to determine whether:

- The carbohydrate level is going up.
- Cholesterol and sodium levels are going down.
- The dietary fiber level is going up.

Establishment of the Nutrient Standards Grade Groups

The Nutrient Standards for lunch and breakfast are set, at a minimum, for these grade levels:

Lunch required grade groups	Breakfast required grade groups
Preschool *Grades K-6* *Grades 7-12* *Plus optional standard for grades K-3*	*Preschool* *Grades K-12* *Plus optional standard for grades 7-12*

Required Minimum Calorie and Nutrient Levels for Enhanced Food Based, Traditional Food Based and Nutrient Analysis Menu Planning Systems for SCHOOL LUNCHES by Grade Levels (School Week Averages)				
Nutrients and Energy Allowances	Minimum Requirements			Optional
	Preschool	Grades K-6	Grades 7-12	Grades K-3
Energy Allowance/Calories	517	664	825	633
Total Fat (as a percent of actual total food energy)	(1)	(1)	(1)	(1)
Saturated Fat (as a percent of actual total food energy)	(2)	(2)	(2)	(2)
RDA for Protein (g)	7	10	16	9
RDA for Calcium (mg)	267	286	400	267
RDA for Iron (mg)	3.3	3.5	4.5	3.3
RDA for Vitamin A (RE)	150	224	300	200
RDA for Vitamin C (mg)	14	15	18	15
(1) Not to exceed 30 percent over a school week. (2) Less than 10 percent over a school week.				
Table 1 Section 12				

Required Minimum Calorie and Nutrient Levels for Enhanced Food Based, Traditional Food Based and Nutrient Analysis Menu Planning Systems for SCHOOL BREAKFASTS by Grade Levels (School Week Averages)			
Nutrients and Energy Allowances	Minimum Requirements		Optional
	Preschool	Grades K-12	Grades 7-12
Energy Allowance/Calories	388	554	618
Total Fat (as a percent of actual total food energy)	(1)	(1)	(1)
Saturated Fat (as a percent of actual total food energy)	(2)	(2)	(2)
Protein (g)	5	10	12
Calcium (mg)	200	257	300
Iron (mg)	2.5	3.0	3.4
Vitamin A (RE)	113	197	225
Vitamin C (mg)	11	13	14
(1) Not to exceed 30 percent over a school week. (2) Less than 10 percent over a school week.			
Table 2 Section 12			

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School Breakfast Pattern for Enhanced Food Based Menu Planning

Meal Component	Minimum Quantities Required For		
	Ages 1-2	Preschool	Grades K-12*
Milk (Fluid) (As a beverage, on cereal or both)	1/2 cup	3/4 cup	8 fl. ounce
Juice/Fruit/Vegetable Fruit and/or vegetable; or full-strength fruit juice or vegetable juice	1/4 cup	1/2 cup	1/2 cup
Select one serving from each of the following components or two from one component:			
Grains/Breads* One of the following or an equivalent combination:			
Whole grain or enriched bread	1/2 slice	1/2 slice	1 slice
Whole grain or enriched biscuit/roll, muffin, etc.	1/2 serving	1/2 serving	1 serving
Whole grain, enriched or fortified cereal	1/4 cup or 1/3 ounce	1/3 cup or 1/2 ounce	3/4 cup or 1 ounce
Meat or Meat Alternates			
Meat/poultry or fish	1/2 ounce	1/2 ounce	1 ounce
Cheese	1/2 ounce	1/2 ounce	1 ounce
Egg (large)	1/2	1/2	1/2
Peanut butter or other nut or seed butters	1 Tablespoon	1 Tablespoon	2 Tablespoon
Cooked dry beans and peas	2 Tablespoons	2 Tablespoons	4 Tablespoons
Yogurt, plain or flavored, unsweetened or sweetened	2 oz. or 1/4 cup	2 oz. or 1/4 cup	4 oz. or 1/2 cup
Nut and/or seeds (as listed in program guidance) (1)	1/2 ounce	1/2 ounce	1 ounce

(1) No more than 1 oz. of nuts and/or seeds may be served in any one meal.
*Option for Grades 7-12; one additional serving of Grains/Breads should be served daily in addition to the components listed above.

Enhanced Food Based Breakfast Requirements

The School Breakfast Pattern requires that four components be offered. Each breakfast menu offered and claimed for reimbursement must conform to one of three combinations. These combinations are shown below.

Combinations Containing Required Components

Combination 1	OR	Combination 2	OR	Combination 3
8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 2 Grains/Breads		8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 2 oz. Meat/Meat Alt.		8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 1 Grains/Breads 1 oz. Meat/Meat Alt.

* **full-strength** fruit or vegetable juice.

✣ In schools **not implementing offer versus serve,** a student must take full portions of all four components offered.

✣ **The reimbursable offer versus serve meal selections are shown below. In schools implementing offer versus serve,** students can refuse any **one** of the components offered and still have a reimbursable meal.

Selections from Combination 1	OR	Selections from Combination 2	OR	Selections from Combination 3
1/2 cup Juice/Fruit/Veg. 2 Grains/Breads **OR** 8 oz. Milk 2 Grains/Breads **OR** 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 Grains/Breads		1/2 cup Juice/Fruit/Veg. 2 oz. Meat/Meat Alt. **OR** 8 oz. Milk 2 oz. Meat/Meat Alt. **OR** 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 oz. Meat/Meat Alt.		1/2 cup Juice/Fruit/Veg. 1 oz. Meat/Meat Alt. 1 Grains/Breads **OR** 8 oz. Milk 1 oz. Meat/Meat Alt. 1 Grains/Breads **OR** 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 Grains/Breads **OR** 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 oz. Meat/Meat Alt. **OR** 8 oz. Milk 2 oz. Meat/Meat Alt. **OR** 8 oz. Milk 2 Grains/Breads **OR** 1/2 cup Juice/Fruit/Veg. 2 oz. Meat/Meat Alt. **OR** 1/2 cup Juice/Fruit/Veg. 2 Grains/Breads

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Sample Breakfast Menus

Food Components	Menu	Portion
Juice/Fruit/Vegetable	Apple Juice	1/2 c.
Grains/Breads	Cheese Toast (Bread[2])	1 slice
Meat or Meat Alternate	Cheese	1 oz.
Fluid Milk	Milk	1/2 pt.
Juice/Fruit/Vegetable	Grapefruit Juice	1/2 c.
Grains/Breads	Pancakes with Syrup	2 (2 Grains/Breads)
Fluid Milk	Milk	1/2 pt.
Juice/Fruit/Vegetable	Cantaloupe Wedge[5]	1/2 c.
Grains/Breads	Toasted Bagel	1/2
Meat or Meat Alternate	Peanut Butter	2 Tbsp.
Fluid Milk	Milk	1/2 pt.
Juice/Fruit/Vegetable	Fruit Cup (Banana, Orange, Pineapple Chunks)	1/2 c.
Meat or Meat Alternate	1 large hard-cooked egg	1 large egg (2 M/MA)
Fluid Milk	Milk	1/2 pt.
Juice/Fruit/Vegetable	Orange Juice or Banana	1/2 c.
Grains/Breads	Choice of Ready-to-Eat Cereal	3/4 c.
	Whole Wheat Toast	1 slice
Fluid Milk	Milk	1/2 pt.

Minimum Quantities for Traditional Food Based Meal Pattern Breakfast

	Required		
Meal Component	**Ages 1-2**	**Preschool**	**Grades K-12**
Milk (Fluid) (As a beverage, on cereal or both)	1/2 cup	3/4 cup	8 fl. oz.
Juice/Fruit/Vegetable Fruit and/or vegetable; or full-strength fruit juice or vegetable juice	1/4 cup	1/2 cup	1/2 cup
Select one serving from each of the following components or two from one component:			
Grains/Breads *One of the following or an equivalent combination:*			
Whole grain or enriched bread	1/2 slice	1/2 slice	1 slice
Whole grain or enriched biscuit/roll, muffin, etc.	1/2 serving	1/2 serving	1 serving
Whole grain, enriched or fortified cereal	1/4cup or 1/3 oz.	1/3 cup or 1/2 oz.	3/4 cup or 1 oz.
Meat or Meat Alternates:			
Meat/poultry or fish	1/2 oz.	1/2 oz.	1 oz.
Cheese	1/2 oz.	1/2 oz.	1 oz.
Egg (large)	1/2	1/2	1/2
Peanut butter or other nut or seed butters	1 Tablespoon	1 Tablespoon	2 Tablespoon
Cooked dry beans and peas	2 Tablespoons	2 Tablespoons	4 Tablespoons
Yogurt, plain or flavored, unsweetened or sweetened	2 oz. or 1/4 cup	2 oz. or 1/4 cup	4 oz. or 1/2 cup
Nut and/or seeds (as listed in program guidance) (1)	1/2 oz.	1/2 oz.	1 oz.

(1) No more than 1 oz. of nuts and/or seeds may be served in any one meal.

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Traditional Food Based Breakfast Requirements

The School Breakfast Pattern requires that four components be offered. Each breakfast menu offered and claimed for reimbursement must conform to one of three combinations. These combinations are shown below.

Combinations Containing Required Components

Combination 1	OR	Combination 2	OR	Combination 3
8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 2 Grains/Breads		8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 2 oz. Meat/Meat Alt.		8 oz. Milk 1/2 cup Juice*/Fruit/ Vegetable 1 Grains/Breads 1 oz. Meat/Meat Alt.

* full-strength fruit or vegetable juice.

◇ In schools **not implementing offer versus serve**, a student must take full portions of all four components offered.

◇ **The reimbursable offer versus serve meal selections are shown below. In schools implementing offer versus serve,** students can refuse any one of the components offered and still have a reimbursable meal.

Selections from Combination 1	OR	Selections from Combination 2	OR	Selections from Combination 3
1/2 cup Juice/Fruit/Veg. 2 Grains/Breads OR 8 oz. Milk 2 Grains/Breads OR 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 Grains/Breads		1/2 cup Juice/Fruit/Veg. 2 oz. Meat/Meat Alt. OR 8 oz. Milk 2 oz. Meat/Meat Alt. OR 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 oz. Meat/Meat Alt.		1/2 cup Juice/Fruit/veg. 1 oz. Meat/Meat Alt. 1 Grains/Breads OR 8 oz. Milk 1 oz. Meat/Meat Alt. 1 Grains/Breads OR 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 Grains/Breads OR 8 oz. Milk 1/2 cup Juice/Fruit/Veg. 1 oz. Meat/Meat Alt. OR 8 oz. Milk 2 oz. Meat/Meat Alt. OR 8 oz. Milk 2 Grains/Breads OR 1/2 cup Juice/Fruit/Veg. 2 oz. Meat/Meat Alt. OR 1/2 cup Juice/Fruit/Veg. 2 Grains/Breads

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❖ Competitive Food Policy

Competitive Food Service Policy

School districts have the authority to establish rules or regulations as are necessary to control the sale of foods in competition with meals served under the National School Lunch and School Breakfast Programs. Such rules or regulations must prohibit the sale of foods of minimal nutritional value in the foodservice area during the breakfast and lunch periods. The four food categories of minimal nutritional value (soda water, water ices, chewing gum, certain candies) are further defined on the following page. These restricted foods may be sold, at the discretion of local school officials, in other areas of the school campus throughout the school day.

Food Service Area Defined

USDA policy defines food service areas as "areas on school premises where program meals are either 'served' or 'eaten' and sale of minimal nutrition value foods including carbonated beverages are prohibited in these areas. Student access to these items in areas where meals are provided is considered a violation of the competitive foods rule.

Expenditures for Competitive Food Sales

When competitive foods are purchased from the school foodservice account, a separate accounting must be maintained to provide a clear audit trail. Program funds must not be commingled with the sale revenues or expenditures for foods of minimal nutritional value.

Nonrestricted Foods

Please note that, although they are competitive foods; ice cream, ice milk and water ices that include fruit or fruit juice are not restricted. Also, certain beverages that do not contain soda water (carbonation) are not restricted. "Chips" are not restricted; neither are flavored (chocolate, strawberry, vanilla, etc.) candies that may contain any of the following: nuts, peanut butter, caramel, coconut, nougat centers, milk-based fillings or other similar ingredients. Competitive foods other than the four categories indicated on page 16.2 may be sold, at the discretion of local school officials, in the cafeteria during the lunch and breakfast periods. However, revenues from such sales must accrue to the benefit of the nonprofit school food service or student organizations approved by the school.

Further Clarification Regarding Soda Water

Numerous questions have been received from schools and industry regarding whether specific carbonated water products are classified as a "Food of Minimal Nutritional Value."

The following will clarify the soda water definition as it applies to the Child Nutrition Programs to help answer these queries:

All beverages that are carbonated (produced from either natural or artificial means) with or without any amount of natural or artificial flavoring(s), artificial sweetener(s), added nutrient(s), juice concentrate(s), or single strength juice(s) are classified as a "Food of Minimal Nutritional Value." CARBONATED BEVERAGES include those products named SPARKLING WATER, SELTZER WATER, CLUB SODA or NATURALLY CARBONATED WATER.

For exempted products under this category, see page 16.4.

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Federal regulations prohibit the sale of certain foods, determined to be of minimal nutritional value, in the foodservice area during meal periods.

Restricted Foods

The foods that are restricted from sale to students are classified in these four categories:

- **Soda Water**—any carbonated beverage. No product shall be excluded from this definition because it contains discrete nutrients added to the food such as vitamins, minerals and protein.

- **Water Ices**—any frozen, sweetened water such as "...sicles" and flavored ice with the exception of products that contain fruit or fruit juice.

- **Chewing Gum**—any flavored products from natural or synthetic gums and other ingredients that form an insoluble mass for chewing.

- **Certain Candies**—any processed foods made predominantly from sweeteners or artificial sweeteners with a variety of minor ingredients that characterize the following types:

  Hard Candy—A product made predominantly from sugar (sucrose) and corn syrup that may be flavored and colored, is characterized by a hard, brittle texture and includes such items as sour balls, lollipops, fruit balls, candy sticks, starlight mints, after dinner mints, jaw breakers, sugar wafers, rock candy, cinnamon candies, breath mints and cough drops.

  Jellies and Gums—A mixture of carbohydrates that are combined to form a stable gelatinous system of jellylike character and are generally flavored and colored, and include gum drops, jelly beans, jellied and fruit-flavored slices.

  Marshmallow Candies—An aerated confection composed of sugar, corn syrup, invert sugar, 20 percent water and gelatin or egg white to which flavors and colors may be added.

  Fondant—A product consisting of microscopic-sized sugar crystals that are separated by a thin film of sugar and/or invert sugar in solution such as candy corn, soft mints.

  Licorice—A product made predominantly from sugar and corn syrup that is flavored with an extract made from the licorice root.

  Spun Candy—A product that is made from sugar that has been boiled at high temperature and spun at a high speed in a special machine.

  Candy Coated Popcorn—Popcorn that is coated with a mixture made predominantly from sugar and corn syrup.

South Carolina Nutrition Policies

State Legislation Regarding School Nutrition and Food Services

Proviso 28.100 of the 1990 Appropriations Act requires that the State Board of Education develop nutritonal policies for foods available to students during the school day based on the United States Dietary Guidelines for Americans and the nutritional requirements of the National Child Nutrition Program.

Beginning School Year 1994-95

1. In order to encourage students to adopt and maintain healthy life-styles which promote wellness and prevent diet related diseases, all schools by school year 1994-1995 should provide only foods and beverages to students during the school day* which meet the U. S. Department of Agriculture (USDA) Department of Health and Human Services (DHHS) Dietary Guidelines and/or the nutritional requirements of the Child Nutrition Programs (National School Lunch and Breakfast Programs).

2. By 1994-1995 school year, when a high school operates a canteen, concession stand or vending program, all food and beverages should be healthy food choices as identified by USDA dietary guidance.

Beginning School Year 1990-91

3. All food made available for sale or service to students in the elementary, middle and junior high schools during the school day* should be consistent with the USDA/DHHS dietary guidelines and the Child Nutrition Program requirements.

*School day is defined as follows: Beginning with the breakfast program and through the instructional day or when the first bus arrives and through the instructional day.

South Carolina School Boards Association

In the *1998 Policy and Legislative Update* published by the South Carolina School Boards Association, competitive foods issues are addressed. The following guidance is provided: *"The Southern Association of Colleges and Schools also has accreditation standards for schools in different areas, one of which is student services and activities. Nutrition falls under this area, and the Association has recently corresponded with districts about the necessity of having a competitive food policy in place as a part of a school's accreditation process."*

To assist district's in developing this policy, thhe South Carolina School Boards Association provides a model policy with several options. In addition, further information is available if districts need help in developing more detailed guidelines.

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Exemptions

Several products have been exempted from the category of foods of minimal nutritional value. This means these products can be sold during the meal period in a school foodservice area. It does not mean these products are approved or endorsed by the Food and Nutrition Service (FNS) of the USDA or indicate they have significant nutritional value. In addition, this exemption should not be perceived as encouragement to purchase these products.

The exemption of one product does not extend to similar products or a family of products. School district personnel should check the ingredient statement of each exempted food on the list to differentiate between exempted products and similar non-exempted products.

Exempted Products (revised 3-30-98)

✧The Popcorn Explosion

Peanut Butter Honey Popcorn - Ingredient statement: Roasted peanuts, popcorn, brown sugar, water, butter, honey, corn syrup solids, natural flavor.

✧Knudson and Sons, Inc.

Orange Passionfruit Spritzer - Ingredient statement: Sparkling water; white grape, passionfruit and orange juice concentrates; natural flavors.

Orange Spritzer-Ingredient statement: Sparkling water, concentrated white grape and orange juices, natural flavor.

Jamaican Style Lemonade Spritzer-Ingredient statement: Sparkling water, white grape and lemon juice concentrates, natural flavors.

✧FJ FIZZ

Grape flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated white grape and concord grape juice, concentrated acerola cherry puree, natural flavors.

Cherry flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated apple, cherry pineapple and plum juices, natural flavors, concentrated acerola cherry puree.

Strawberry flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated white grape, apple, strawberry and pineapple juices; concentrated acerola cherry puree, natural flavors, grape skin extract (for color).

Raspberry flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated white grape and raspberry juices, natural flavors, concentrated acerola cherry puree.

Orange flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated white grape, orange and apple juices, orange oil.

Cherry Cola flavored sparkling fruit juice beverage from concentrates-Ingredient statement: Sparkling water, concentrated white grape and cherry juices; natural flavors, concentrated acerola cherry puree.

✧Great Brands of Canada, Ltd. "All Canadian" brand

Sparkling Spring Water with natural fruit flavors (Strawberry, Black Cherry, Raspberry, Peach Orange, Watermelon, Lemon Lime)-Ingredient statement: Spring water, high fructose corn syrup, citric acid, concentrated fruit juice (Caribbean cherry and/or Kiwi), natural flavors, sodium benzoate, potassium sorbate (as a preservative), ascorbic acid (as antioxidant), carbon dioxide.

✧Farley Foods, U.S.A.

Farley's THE ROLL Cherry Fruit Roll sip-Ingredient statement: Fruit (pears, oranges, cherries) sucrose, maltodextrin, partially hydrogenated vegetable oil (cottonseed, soybean), malic acid, citric acid, glycerol monosterate, natural and artificial flavor, pectin, ascorbic acid (vitamin C), alphatocopherol acetate (vitamin E), beta carotene (vitamin A, red 40.

Farley's THE ROLL Strawberry Fruit Roll slp-Ingredient statement: Fruit (pears, oranges, strawberries) sucrose, maltodextrin, partially hydrogenated vegetable oil (cottonseed, soybean), malic acid, citric acid, glycerol monosterate, natural and artificial flavor, pectin, ascorbic acid (vitamin C), alphatocopherol acetate (vitamin E), beta carotene (vitamin A, red 40).

❖General Mills, Inc.

FRUIT by the FOOT (SPECIAL EDITION)

Color by the Foot, Triple Fruit Punch-Ingredient statement: Orange juice from concentrate, grapes from concentrate, sugar, maltodextrin, pears from concentrate, corn syrup, partially hydrogenated cottonseed oil, carrageenan, citric acid, monoglycerides, sodium citrate, malic acid, acetylated mono and diglycerides, xanthan gum, vitamin C (ascorbic acid), locust bean gum, natural flavor, potassium citrate, yellow 5, red 40, blue 1.
Strawberry Punch Fruit by the Foot-Ingredient statement: Orange juice from concentrate, grapes from concentrate, sugar, maltodextrin, corn syrup, strawberries, partially hydrogenated cottonseed oil, carrageenan, citric acid, natural and artificial flavor, monoglycerides, sodium citrate, malic acid, acetylated mono and diglycerides, xanthan gum, vitamin C (ascorbic acid), locust bean gum, potassium citrate, red 40.

FRUIT ROLL-UPS (SPECIAL EDITION)

Strawberry Punch Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, strawberries, partially hydrogenated cottonseed oil, citric acid, sodium citrate, natural flavor, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), red 40.
Crazy Color Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), natural flavor, yellow 5, red 40, blue 1.
Screamin' Green Hot Color Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), natural flavor, high fructose corn syrup, yellow 5, blue 1, and other color added.
Electric Yellow Hot Color Fruit Roll-Up—Ingredient satement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (sodium ascorbate), natural flavor, high fructose corn syrup, yellow 5, and other color added.
Sizzling Red Hot Color Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), natural flavor, high fructose corn syrup, red 40, and other color added.
Tropical Cherry Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), natural flavor, red 40.
Blazin' Blue Hot Color Fruit Roll-Up—Ingredient statement: Pears from concentrate, maltodextrin, orange juice from concentrate, sugar, corn syrup, partially hydrogenated cottonseed oil, citric acid, sodium citrate, pectin, monoglycerides, malic acid, vitamin C (ascorbic acid), natural flavor, high fructose corn syrup, blue 1, and other color added.

FRUIT STRING THING (Special Edition)

Sneaky Stripes - Double Berry Punch Flavored—Ingredient statement: Orange juice from concentrate, grapes from concentrate, sugar, corn syrup, modified corn starch, pears from concentrate, dried corn syrup, partially hydrogenated cottonseed oil, citric acid, carrageenan, sodium citrate, monoglycerides, malic acid, vitamin C (ascorbic acid), high fructose corn syrup, potassium citrate, natural flavor, yellow 6, blue 1.
Strawberry Punch—Ingredient statement: Orange juice from concentrate, grapes from concentrate, corn syrup, sugar, modified corn starch, pears from concentrate, dried corn syrup, partially hydrogenated cottonseed oil, itric acid, carrageenan, sodium citrate, monoglycerides, malic acid, vitamin C (ascorbic acid), potassium citrate, natural flavor, red 40.

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✧**Canada Pure Water Company I[illegible] *Sparkling Refreshers***

Natural Wildberry Flavor—Ingredi[illegible] statement: Concentrated strawberry juice, spring water from Canada, natural flavors, citric acid, potassium sorbate (to preserve freshness), CO_2.

Black Cherry—Ingredient statement: Red cherry concentrate, carbonated spring water from Canada, fructose, citric acid, Potassium Benzoate (to preserve freshness).

Peach—Ingredient statement: Peach concentrate, carbonated spring water from Canada, fructose, citric acid, Potassium Benzoate (to preserve freshness).

Natural Lemon Flavor—Ingredient statement: Lemon concentrate, carbonated spring water from Canada, fructose, citric acid, potassium benzoate (to preserve freshness).

Natural Lime Flavor—Ingredient statement: Lime concentrate, carbonated spring water from Canada, fructose, citric acid, potassium benzoate (to preserve freshness).

Natural Orange Flavor—Ingredient statement: Orange concentrate, carbonated spring water from Canada, fructose, citric acid, potassium benzoate (to preserve freshness).

Raspberry—Ingredient statement: Raspberry concentrate, carbonated spring water from Canada, fructose, citric acid, potassium benzoate (to preserve freshness).

✧**Clearly Canadian Beverage Corporation Quencher**

Grape, Apple, Tropical Lime, Fruit & Berry-Ingredient statement: Carbonated water, high fructose corn syrup, natural flavour, concentrated kiwi juice, citric acid, sodium benzoate (to conserve freshness).

✧**Brach & Brock, Confections, Inc.**

HI-C Fruit Snack-Ingredient Statement: Fruit juice concentrates (orange, grape, strawberry, apple, cherry, and lemon), corn syrup, sugar, gelatin, sorbitol, malic acid, ascorbic acid (vitamin C), sodium citrate, natural and artificial flavors, mineral oil, carnauba wax, red 40, yellow 6, yellow 5, blue 1.

✧**North Face Beverages, *SPLASH Thirst Quencher***

Cherry-Ingredient Statement: Carbonated spring water, fructose, corn syrup, lemon, orange, cherry and grape juice concentrates, citric acid, natural flavors, sodium benzoate, potassium sorbate, red 40.

Lemon Lime-Ingredient Statement: Carbonated spring water, fructose, corn syrup, lemon and lime juice concentrates, citric acid, natural flavors, sodium benzoate, potassium sorbate, yellow 5, blue 1.

Grapefruit-Ingredient Statement: Carbonated spring water, fructose, corn syrup, lemon, grapefruit juice concentrate, citric acid, potassium citrate, natural flavors, sodium benzoate, potassium sorbate

Mountainberry-Ingredient Statement: Carbonated spring water, fructose, corn syrup, lemon, grape, strawberry and raspberry juice concentrates, citric acid, natural flavors, sodium benzoate, potassium sorbate, red 40.

Orange-Ingredient Statement: Carbonated spring water, fructose, corn syrup, orange and lemon juice concentrates, citric acid, potassium citrate, natural flavors, sodium benzoate, potassium sorbate, yellow 6.

Strawberry-Kiwi-Ingredient Statement: Carbonated spring water, fructose, corn syrup, lemon, kiwi, strawberry and grape juice concentrates, citric acid, natural flavors, sodium benzoate, potassium sorbate, red 40.

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